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# THE THREE-DIMENSIONAL PERSONALITY TEST

## Reliability, Validity and Clinical Implications

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DEDICATED TO

*Alfred, my husband, and Ira, my son,*
*who patiently indulged me the*
*time and freedom necessary*
*to complete this book*

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# Introduction

On August 30th, 1951, I arrived at the Palmer House in Chicago for the meetings of the American Psychological Association. Going to the mezzanine in search of a program I had planned to attend, I found my way blocked by a crowd, facing away from me, standing quietly, and seemingly absorbed in an ongoing event which was out of my range of vision. Thinking that a group of psychologists would attend so earnestly, only, if the event were truly worth observing, I decided to find out what was going on. Inching my way gently but firmly through the crowd, I reached the focus of attention where I saw Doris Twitchell-Allen demonstrating the administration of the 3-DPT.

The multiple forms of this test, displayed at one and the same time, the three-dimensional aspect of the test forms, the color as well as the variety in size and ambiguity of the forms intrigued me. I was impressed further by the excitement displayed by the subject being tested, by the avidity with which he grasped the test forms, the active manner in which he manipulated the forms and acted out his theme as he carried out the directions given. As he worked he revealed affect, attitudes and ideas not only through words, but even more graphically through manipulations of test forms, facial expressions and body movements. These observations indicated to me that this test with its multiple, variegated, three-dimensional, ambiguous forms provided, in one hour of testing, multiple approaches to the study of the dynamics of personality. I realized that this test was not dependent upon the subject's ability to verbalize his ideas, for the manipulations of the test forms were as revealing as words; in fact, the manipulations seemed to be substitutes for words which the subject could not bring to verbal expression. The manipulations seemed to express ideas and feelings that were stored in the deep layers of the personality, layers not readily available to conscious expression.

These thoughts crowded into my mind as I watched the demonstration, and they clamored for expression, but I managed to inhibit them until the test demonstration was over. When I approached Dr. Allen with great enthusiasm and many questions she replied: "Perhaps if you take the test some of your questions will be answered." I sat down and was tested. The experience is still fresh in my mind. As I worked I realized that the material being tapped by the 3-DPT forms derived from a deep layer of my personality, a layer that had been closed off from conscious concern by comfortable rationalizations. No other projective test had given me such insights so quickly and so convincingly during a personal testing session.

Then and there I decided to study the 3-DPT with a view to standardizing it, establishing norms and providing interpretive insights that would permit this test to become an indispensable tool for the clinician both in the analysis of personality and in the treatment of personality problems. My observations and personal experience that day convinced me that the test could reveal in a very short time the core problem as well as the true underlying dynamics operating in the personality. I was particularly impressed with the multiplicity of overt behavior variables that were elicited by the directions "to select test forms and give a story." Accordingly I told Doris Allen of my interest in the test, my intention to standardize it and to evaluate the behavior variables which were provoked in the story parts of this test situation. In short, I expressed the intention of writing this book.

This volume presents the analysis and interpretive significance of the 3-DPT Productions, Stories, and Fein Testing of Limits Variables as well as statistical evidence of the reliability and validity of the 3-DPT as an instrument for measuring personality functions.

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# Chapter I

# Behavior Variables in the Productions of The Three-Dimensional Personality Test

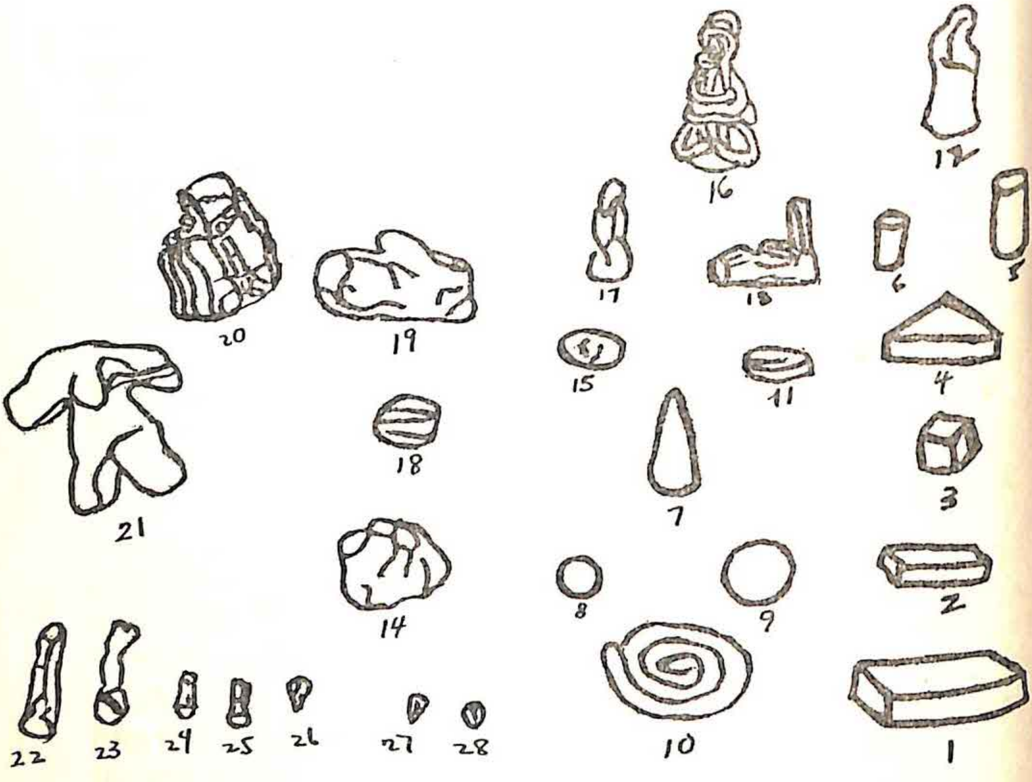
The purpose of this study is to determine the reliability of the Three-Dimensional Personality Test (3-DPT) as a measuring instrument, establish normative data for the behavior variables in the productions of the 3-DPT, and determine the *manner in which these variables serve to distinguish between healthy and pathological patterns of adjustment.*

As a projective technique, the 3-DPT should afford opportunity for revealing the dimensions of the various layers of the personality through projections of personality stresses onto the semistructured test forms. Thus it may be expected to provide indices to dynamics such as aggressions, fears, anxieties, conflicts, needs and tensions, and object relationships in the subject's life span. The wide range of forms in number, size and structure should permit manifold conceptions which may well provide indices to levels of intellectual, emotional and social development. Such factors as flexibility and rigidity of ideation and affect, breadth and areas of interests, clarity of perception and conception, as well as conceptual capacities, both abstract and concrete, may be expected to be tapped by this test.

## Unique Characteristics of the 3-DPT

The 3-DPT is unique in the respect that the 28 test forms are three-dimensional. They are less concretely structured

# Standard Arrangement of 3-DPT Forms for Test Administration



than the test forms of the MAPS- and TAT-type tests, but slightly more structured than the Rorschach. In addition, the backgrounds for the figures of the 3-DPT are completely unstructured, permitting the subject to create whatever background he needs. These unique characteristics permit several testing procedures, *all of which can be performed within one hour's time.*

The discrete three-dimensional ambiguous forms of this test, free of a structured background, provide opportunity for manipulation, constructions, verbal constructions, associations and role-playing. The Naming Task within the test calls for associations to the individual test forms as presented to the subject by the examiner in a standard – but spatially "random" – order.

The story parts of this test invite manipulation and verbal constructions by requesting the subject to pick any test forms he desires out of the setting, then, tell one story using the selected test forms in the story. Thus the story calls for the coherent development of a simple or complex theme, and for the establishment of relationships conceptual and/or physical between the test forms selected by the subject. It is apparent that this test serves to combine the major testing procedures of other projective tests and, in addition, provides opportunity for manipulations and physical constructions.

The 3-DPT, by virtue of its discrete three-dimensional, ambiguous test forms and completely unstructured background, permits the subject great freedom of choice in terms of projected ideas, actions and events in place, time, number and type of participants as well as environmental props. This freedom of choice in the use of test forms and background may serve to reach down into the deeper layers of the personality, bypassing superficial blind-alley material (not directly relevant to critical conflicts in the person) which is often tapped by two-dimensional material and by more structured forms and backgrounds. If this test does bypass superficial material, it may provide, in a very short testing time, clear-cut insights into deep-seated dynamics and content. The third dimension of this test, which invites manipulation and physical constructions, provides the subject with tactile and motor sensations as well as visual sensations. The tactile and motor responses elicited by this test may reach areas of the personality that the subject cannot bring to verbal expression and thus may provide significant and new insights into the personality.

Several investigators (18, pp. 28-29) have reported the phenomenon of "touching" as characteristic of very perplexed schizophrenics. This phenomenon appears in patients who are so withdrawn that they need the feel of the object to recall them to the world of objects. This phenomenon has been grouped with "naming" for it seems to accompany naming or to substitute for naming when words fail the perplexed and withdrawn patients. Further evidence in support of this claim that manipulations are substitutes for words may be deduced from the fact that in our pilot study the normal adult sample averaged 50 words a story with a range from 5 to 100 words, giving manipulation constructions as substitutes for lengthy explanations. The average number of words obtained with this test as well as the spread is in sharp contrast to the average number of words (300) found by Murray (161, p. 4) to be characteristic of normal adult performance in TAT stories. The 3-DPT, by providing manipulation opportunities, should offer unique possibilities in the study of the psychically withdrawn as well as in the study of individuals limited in their environmental interactions due to blindness, deafness and/or lack of speech.

Finally, the method of administration of this test material is unique in the respect that it expects the subject to tackle the *same problem situation twice.* The first time the subject is asked to select test forms and use them in a story, the parts of the problem are completely new to him. The second time he meets the problem it is a familiar situation, since he has had a chance to try it out at the beginning of the test session and has had a chance to identify each individual test form, through the standard naming procedure. Logically, it would appear that the first time the subject meets the problem it is a more complex task than it is the second time. Thus performance in the Prenaming Task would indicate the manner in which the individual meets a new complex problem while performance in the Postnaming Task would indicate whether he profits from experience in spite of the anxiety and stress that might have been roused by the associations to the test forms during the first two test tasks.

To profit from experience a subject must have flexible controls over ideas and feelings so that he can bypass ideas and feelings unrelated to the theme goal, and he must be able to give expression to those ideas and feelings essential to the development of the theme goal.

Flexibility of controls which permits a subject to profit from experience would thus be reflected by a subject's ability to give a story for the Postnaming Task that is different in theme from the story of the Prenaming Task and is developed in an integrated goal-directed manner.

Rigidity of controls which interferes with a subject's ability to profit from experience would be reflected by a subject's inability to give a new theme, or inability to develop a goal-directed theme in the story of the Postnaming Task.

Inadequate or weak controls would also interfere with a subject's ability to profit from experience. A subject with weak controls would be unable to bypass ideas and feelings irrelevant to the theme. Weak controls of ideas and feelings would be reflected by manipulations and verbalizations that are not integrated with the story theme.

## TESTING OF LIMITS TASKS

Two Testing of Limits Tasks were designed and added by the writer to the test administration in an effort to penetrate the defenses of severely blocked subjects who had been unable to respond to the standard 3-DPT Tasks. These severely blocked patients had been unable to respond to all projective and objective tests routinely administered to all patients by the regular staff at High Point.

In Testing of Limits 1, (TL1) the examiner places test forms #21, #12, and #17 on the second table so that all three figures face a central point:

21 17
12

Then the examiner asks the subject to make up a story using these three test forms in his story. This procedure was first used in cases where the subject was unable to respond to the requests for the Prenaming and Postnaming stories, as was the case with some depressives and catatonics. It was also used in cases where the subject could give a story in the Prenaming Task but not in the Postnaming Task. Finally, it was used with subjects who avoided using any forms symbolic of humans as was the case with very evasive individuals.

The rationale for this procedure was as follows: Since test form #21 is symbolic of a man, test form #12 is symbolic of a woman, and test form #17 is symbolic of a child, it was assumed that if the subject could identify these test forms in expected symbolic fashion, it would be an index of the subject's ability to accept humans. If the subject could then express some sort of a relationship between the human symbols it would be an index of his ability to form relationships with other humans. Thus if the subject was able to relate these humans conceptionally and/or through action or affect, it would indicate the type of relationships he experiences. The relationships might be expressed verbally or merely by manipulations and/or manipulation constructions. Thus, if the subject moves one of the figures away from the other two, or moves one closer to another one – leaving the third by itself – or moves them all apart, or places one with its back to the others, these constructions would give insight into the type of relationships experienced in the child-parents constellation.

The second Testing of Limits Task (TL2) was introduced for those subjects who could not respond with human identifications in the first Testing of Limits (TL1). In the second Testing of Limits (TL2) the examiner says: "This time I will begin the story and you finish it. This [pointing to test form #12] is the mother; this [pointing to test form #21] is the father; this one [pointing to test form #17] is the child; now go on with the story." If the subject is male, the examiner identifies test form #17 as a little boy; if the subject is female, test form #17 is identified as a little girl. When used with very withdrawn subjects, with very timid children, or with very young children, it is helpful to identify test form #17 by the name of the patient or child being tested.

The TL2 was introduced in an effort to see if the subject could accept himself and others when the facts of identity were presented to him by a supportive and permissive authority. It was assumed that if the subject could accept the identifications of test forms as a family unit and relate them affectively and/or through activity, he would profit from therapy; but if he could not accept the identifications, or if he accepted them but could not relate them affectively or through action of some sort, or if he denied any relationship, then he was not likely to profit from therapy.

## DEFINITIONS OF TERMS USED

### PRODUCTION

The term, Production, as used here includes the verbalizations as well as the manipulations and manipulation constructions offered by the subject *in response to the directions, "select test forms and use them in one story."* Some Productions are offered that contain only verbalizations and no manipulations while at other times the reverse is offered, i.e., a subject will simply select test forms and place them on the second table with or without further manipulations, and will offer no verbal elaborations. These variations are still called Productions. *The Production refers to what the subject has produced in response to the directions.*

*Example 1.* Production contains verbalizations only.

Male alcoholic, age 32. "I don't need any of these pieces. I can tell you a story without them. There was once a sculptor . . ." etc.

*Example 2.* Production containing manipulations only. Test forms are simply placed on Table 2.

Boy, 11 years old, selected test forms #10, #21, and #9 and placed them on Table 2. He then began to cry saying, "I don't know a story."

*Example 3.* Production containing manipulations only. Test forms are combined into a structure. No verbalizations.
Boy, 13 years old, selected test forms #1, #2, #3, #4, #10, placed them on Table 2 and combined test forms #1, #2, and #3 as follows and said, "I don't know a story."

3
2
1

## STORY

The term, Story, as used here, refers to that verbal part of the Production which is offered by the subject as *his story. Some subjects follow directions explicitly, i.e., they select their test forms, place them on the second table, and only then do they verbalize the Story. In these cases it is obvious what part of the Production is called a Story.* Other subjects select test forms, and as they move them to the second table, they verbalize their identifications. When ready they generally announce, "Now my story."

In such cases, the *Story refers only to the part designated as "story" by the subject. The verbalized identifications given while selecting the test forms are not considered part of the Story, but they are part of the Production.* In these cases the *naming* or *description* of *test forms* given before the Story begins, are not counted as part of the Story. *On the other hand,* if the subject *only names, describes, or free-associates to the test forms as he selects them and gives nothing more, makes no further effort to produce a story even after the examiner repeats, "And your Story?" then the* *identifications given constitute his Story* and are analyzed for variables.

Subjects who offer Naming or Description insteady of a story theme appear to be unable to follow directions, i.e., relate objects conceptually in a goal-directed manner and are too perplexed to recognize their disability. These patients are bland, have lost touch and have given up the struggle of coping with reality. On the other hand, there are subjects who perform in like manner, that is, they name, describe and/or free associate to the discrete test forms, but *protest,* "they are isolate, not connected." – These subjects also are unable to follow the directions to relate objects conceptually in a goal-directed manner – but these subjects are less perplexed, for they are aware of their disability. In these latter cases, the subject *is not credited with a Story;* however, his *Production* is examined for variables.

Still other subjects fail to relate the test forms conceptually in a goal-directed manner, but when asked for a story they protest *"I gave you a story,"* and they may or may not repeat their original identifications. These subjects are like the very perplexed cases described above–for these subjects also are unaware of their disability to relate ideas in a goal-directed manner. Their identifications, offered as a "story," are therefore accepted as a story. These subjects who protest, "I gave you a story" (even though they had not given a Story), though unable to follow directions to relate objects and/or ideas in a goal-directed manner appear to sense this disability and appear to be *frightened by this disability,* so deny its existence. These patients are tense, are losing touch, but are struggling to hold on to reality.

An example of a clear-cut Story is seen in the Production below.

*Example 1.* J. D., a 21-year-old woman, single, paranoid schizoprenic, selected test forms #12, #21, #14 and #17, and placed them on Table 2. She then arranged them into a scene and said: "It's most unusual when I think in terms of people."

"To me it connotes the nativity, this [#14] is the creche, this [#12] the Virgin Mary, this [#21] is Joseph, and this [#17] is the representation of all others who might have been there."

After her story, J. D. laughed and said "It's lent, and I'm hungry, and it reminds me of religious phenomena."

Here the selection of test forms and all the verbalizations including "It's most unusual . . ." and the Story, "To me it connotes . . ." as well as the observation, "It's lent and I'm hungry . . ." are in the Production. The *Story* refers only to the verbalizations that begin with "To me it connotes the Nativity" and end with "who might have been there."

Another clearly demarcated Story is seen in the Production by L. L.

*Example 2.* L. L., a 30-year-old woman, married, paranoid schizophrenic, selected test form #21 and placed it on Table 2, saying "Do you want a story or just comments?" – She then selected, and placed on Table 2, test forms #17, #19, "I'm still foggy in the head; I've been sleeping." She then selected and placed on Table 2, test forms #17, #19, #12, moved them into a scenic relationship and said, "Well – man [#21] burdened down, he's trying to get over here to the woman [#12], barrier of confusion [#16], small child [#17] found what looks like a sheltered nook [#19], would probably try to move out of it and get to the mother [#12] but some barrier is there [#16]. These are three very lost kind of beaten up despairing people. *That's about the end of the story.*"

Here the *Production* begins with the selection of test form #21 and the words "Do you want a story or just comments?" and continues through the statement "That's the end of the story." The *Story* begins with the words "man burdened down" and ends with "beaten up despairing people."

In the Production below, the subject could not relate test forms conceptually and stated clearly that she could not do it.

*Example* 3. F. C., a 60-year-old widow, involutional depressive psychosis, selected test form #8 and, placing it on Table 2, said, "It's a sphere because I had kindergarten training, it's familiar – I recognize it *definitely*." Then she placed test form #3 on Table 2 and said "It's a cube."

Test form #17 was placed on Table 2 and described, "this looks like Rodin's Thinker – don't know why it was made."

Test form #7 was selected and described, "This is a symbol also. I used in my work in kindergarten, also brought back the world's fair – trylon. These I would pick out." Test form #10 was selected and described, "this larger form could be a garden hose. If you let your imagination run, it could be a piece of pastry. – These are familiar to me and have associations in past. – Shall I pick more?" Examiner asked: "And your story?" Subject answered: "They are isolated. They are completely unrelated to me. I picked them because they look familiar."

Here the *Production* begins with the selection of test form #8, and the words "It's a sphere," and includes everything through her response to the inquiry: "They are isolated. They are completely unrelated to me. I picked them because they look familiar." These statements indicate clearly that this subject was aware of her perplexity and was willing to acknowledge her inability to relate forms conceptually. She is therefore *not credited with a Story.*

Her associations given in the Production, however, are examined for all the variables. In other words, that part of the Production that the subject offers as a substitute for a Story is analyzed for behavior variables.

The Production below portrays the perplexed patient who can't accept the fact that he is not functioning adequately.

*Example 4.* R. S., a 52-year-old man, married, involutional depressive psychosis, selected test forms #21, #20, #19, #13 and #10, placed them on Table 2, and described each one discretely as he selected it. He then asked examiner, "Is that enough?" Examiner then said "And your story?" to which R. S. responded, "I gave you a story," and he proceeded once again to describe each test form discretely.

*Here the discrete descriptions are accepted as one Story, because the subject called them a story.* The original identifications and his comments as well as his repetitions are all part of the Production. The Story in this case includes only the second elaborated identifications of his selected test forms.

In the Production below, the subject could not follow directions but he did manage to relate some forms conceptually. He was not aware that his performance was inadequate, however, and protested that he gave stories, rather than one *story*.

*Example 5.* I. M., a 50-year-old man, single, obsessive-compulsive, selected test forms #21, #1, #5, #7, #8, #9, #16, #18, #20, #22, #23, #24, #25, #26, #27, #28, #11, #15, and placed them on Table 2. The only comment he made as he selected his first test form (#21) was, "a very interesting thing."

When all his test forms were on Table 2, he moved all the forms selected except test forms #21 and #1 into a pile and said: "This reminds me of when I was a child making mud pies or playing with clay." He then picked up test form #1

and said: "This reminds me of a pummice stone for sharpening razors." Then he picked up test form #21 and said: "This reminds me of a man who has conquered the world, he's come through having accomplished something, he's going forward, he's carrying something and he's *got to get* somewhere."
When examiner asked: "And your story?" he answered disdainfully, *"I gave you stories."*

Here the Production includes his opening observation, "a very interesting thing," as well as his descriptions through "I gave you stories." The Story part begins with "This reminds me of . . ." In this case the subject is credited with *three Stories* since he stated clearly that he gave "stories" rather than a Story. However, once the subject is credited with three Stories, *the material is then treated for variables as though it were one Story.*

### MANIPULATION CONSTRUCTION

This term is used to describe the subject's use of test forms for building, design, dramatic action or other physical manipulation of test forms displayed during the development of the Production.

### PRENAMING PRODUCTION

The Prenaming Production refers, as the term implies, to the Production given by the subject in response to the initial task of this test.

### POSTNAMING PRODUCTION

The Postnaming Production refers to the Production given by the subject to the request for a story after the *Naming Task has been completed.*

The Productions, Stories and Manipulation Constructions contain many variables, of which certain ones may prove to be deviates from expected behavior, and thus may serve as discriminating indices to specific types of malfunction.

## VARIABLES DEFINED AND EXEMPLIFIED

### NUMBER OF STORIES GIVEN IN RESPONSE TO THE REQUEST FOR ONE STORY

Where the subject follows directions explicitly, there will be no difficulty identifying the Story given. However, caution is urged where the subject describes each test form as he selects it. Where the selection and identification of test forms is followed by a clear-cut Story uniting the selected test forms in a theme, the performance is classified as *one Story*. It is still *one Story* if the unifying theme is simply a general category such as "art forms," "geometric forms," "symbols of civilization." On the other hand, where the test forms are discretely described without regard for a unifying theme or general category, the examiner should say, "Now give me a story." If the subject proceeds to give a story, with unifying theme, then he is credited with *one Story*. If the subject says, "I gave you a story," then his discrete performances are scored as *one Story*. But if subject says, "I can't give you a story," then his discrete performances are counted as *separate ideas* but he is not credited with a Story. If the subject says, *"I gave you lots of stories,"* his discrete performances *are counted as separate Stories.* Some subjects actually give several Stories, quite deliberately specifying, "Here is one story," "Here's another story," etc. In these cases, the Number of Stories given is obvious.

*Example 1.* Each test form was treated discretely, the subject protesting, "I gave you lots of stories." Here each identification is counted as a Story.

P. G., a 37-year-old man, paranoid schizophrenic. #21, "A man trying to pull something apart." #14, "I see a head, nose, mouth and chin." #17, "Reclining monkey curled up in knot sleeping, dormant as if it didn't care what was going on." #16, "Lattice work on gate at Leon's restaurant." #23, "Could be a leg of animal with hoof or human leg deformed."

Thus the subject continued to treat each test form discretely.

*Example 2.* Each test form is named and all are united by a generalization, so these offerings are counted as one story.

M. N., a 48-year-old woman, paranoid schizophrenic. #16, "man's first conception of Deity"; #20, "man's ability to build temple"; #13, "man beginning to show woman they have some importance"; #21, "man realizes his power"; and so on through 28 test forms – all united by the generalization, "man's development."

*Example 3.* The Subject deliberately specified the number of Stories given.

K., 52 years old, widow, remarried, paranoid schizophrenic. *a.* "Bill called a girl to go to a party masquerade and this is the clown hat [picked test form #7]. Bill was going as a clown [placed #7 in front of her]. Then they'd have games, bowling contest [subject picked test form #8 and placed it near test form #7], this is the ball." Subject then examined the remaining test forms visually and said, "I tried to find something to represent the girl – she said she'd like to go. *This is a telephone conversation: it's just an episode.* I'm trying to find something to outfit her." Here subject picked test form #22 and said, "This is part of anatomy. He won the contest and they had a good time."

*b.* K. then selected test forms #1, #2, #10, #12 and #21. She placed test form #21 on #1 and said: "This is a man, a strong man who saved a child from snake [placing test form #10 near the two test forms.] He performed many great feats and won several prizes in strength contests, so a famous sculptor dedicated monument in his honor." At this point she indicated test form #21 on test form #1. Then she pointed to test form #1 and said, "This was huge; in strength contests he picked it up." Subject then picked up test form #2 and placed it next to test form #1, but made no further comment.

*c.* K. who had selected test form #12 for the previous production, but had not used it, now picked up this form, carefully examined it, then set it down and gave the following story: "This designates sort of a madonna, as far as a story goes, well, holding a child in her arms. It shows that in spite of all her suffering, this madonna-like person holds her child with great love and feeling."

After she finished these Stories, she said to examiner, "Guess that is plenty; what more do you want?" Here it is quite obvious that the subject intended three Stories.

In response to the Postnaming request for a story, K. gave one Story (presented below) in contrast to the three stories given to the Prenaming Tasks.

*d.* "Do I have to have a piece for everything I mention in a story?" she asked. *Examiner nodded yes.* Subject selected test form #13 and test form #19, placing them on Table 2 with test form #19 in back of test form #13. "This [#13] is the entrance to a store, and this [#19] is a boot in the store window. *Mary is* walking along the avenue, *saw* an attractive boot in the window. *Bill was* a fine salesman and sold her the boots; asked to take her out; they fell in love and lived happily ever after." "I could make up a sad one but why should I," she added as she finished her Production.

*Example 4.* Stories made up of description or naming of discrete test forms. Subject unaware that he did not combine them into a story. Even when examiner asked, "And your story?" the subject simply repeated his identifications of test forms selected and said "I gave you a story." In such cases the responses are considered as *one Story.*

R. S., a 52-year-old man, married, depressive psychosis. #21, "this particular individual holding a piece of wood – wants to break it, or wants to stretch his arms out." #20, "this is an animal holding on to something." #19, "this is a shoe or foot." #13, "this is the same identical form – military type shoe." #10, "this is a horn made of brass."

## NUMBER OF TEST FORMS SELECTED BEFORE STORY IS BEGUN

Count all test forms placed on Table 2 by the subject, before the subject begins his Story. If a test form is placed on Table 2 and then rejected, i.e., is returned to Table 1, the subject indicating that he doesn't want it, do not include this rejected test form in this count.

If the subject identifies the test forms verbally as he places them on Table 2 and *then fails to give a Story, count only the first test form picked up* as Number of Test Forms Selected. The other test forms will be counted in the category, Number of Test Forms Added. If, however, the subject identifies the test forms as he places them on Table 2 and *then proceeds with a Story,* count all test forms placed on Table 2 *before the Story was begun* under Number of Test Forms Selected.

Sometimes the subject spends a good deal of time *before beginning his Story,* touching, looking at, turning, picking up and examining a test form, placing it on Table 2, and finally discarding it by returning it to Table 1. These test forms are not included in the Number Selected *unless he retains it in his hand as he proceeds with his Story, sets it apart from all other test forms on Table 1, or combines it into a structure with other test forms on Table 1.* Test forms treated as described above are counted as Selected. However, if the subject deliberately states, "These don't fit, they don't belong," they are not scored as Selected. In short, where the behavior of the subject indicates that he cannot give up the idea provoked by the test form, the test form is counted as Selected, but where the subject can give up the test form, though reluctantly, the test form is *not counted as Selected.*

*Example 1.* Where test form was selected then reluctantly rejected, subject explaining why it was rejected, the form is not scored as a Test Form Selected.

A. F., a 33-year-old woman, married (normal sample) selected test form #13 among many other test forms, and identified it as a *shoe last* used by a cobbler. She developed a story, omitting this test form, explaining as she moved it apart from all other forms, "This doesn't belong, it doesn't fit anywhere but it's such a nice form I like it – guess because it reminds me of my father who is a cobbler, he is so sweet." Although the test form is not counted quantitatively in this category, it throws light on the dynamics of subject's adjustment, so should be considered in the qualitative analysis.

*Example 2.* In contrast to this performance is the performance of a 53-year-old man, single, alcoholic (psychotic) who selected test forms #21, #23, #20, #17, #1 and #2, and placed them on Table 2. He then tried to balance test form #21 on #23, #17 on #23, gave it up, put #2 on #1, took it apart, put #20 on #1 and left it, identifying it as a "grave stone." He then left test form #2 on Table 2, moved test forms #21, #17 and #23 as a group back to Table 1 in a carefully selected spot, apart from all other test forms, on Table 1.

In this case, all test forms selected before his Story, "grave stone," are counted as Forms Selected even though he appeared to discard the test forms #21, #17 and #23. In reality he did not discard them; he assigned them to a very special and significant niche. Apparently he could not give up the idea provoked by these three test forms.

At times a subject simply picks up one test form, holds it in his hand and proceeds with a Story. In this case the test form held in his hand is counted as Selected. If test forms are later introduced they are counted as Test Forms Added.

Occasionally a subject will develop his Production on Table 1, instead of moving his selected test forms to Table 2. In these cases, it is important to distinguish carefully the test forms chosen from the remaining test forms. It is wise to urge the subject to place his selected test forms on Table 2. Point to Table 2, and say, "Let's do it here."

### NUMBER OF TEST FORMS ADDED AS THE STORY IS DEVELOPED

Some subjects discover, during the development of their Story, that they need additional test forms to complete their Story. These additional test forms are counted separately from the originally selected test forms and are recorded in this category.

Often subjects begin their Story as they select their first test form. In such cases the examiner should repeat the instructions, "Pick as many test forms as you wish, place them on Table 2, and tell a story using your chosen pieces in your story." If the subject continues to develop his Story, adding new forms as he goes along, count all forms *but the first* as additional. This behavior appears to reflect impulsive, inadequately planned behavior stemming from the infantile need for immediate gratification or from inadequate sensitivity to others' needs which permits opportunistic manipulations of the environment.

At times a subject adds a test form, tries it on Table 2, then returns it to Table 1. This test form is not counted in this category. However, if the subject places it in a carefully selected spot on Table 1, apart from all other forms, or if he holds it with his hand as his Story progresses, or combines it with other test forms to produce a construction on Table 1 *as he proceeds with his Story,* it is counted in the category, Forms Added unless he deliberately states that "it *doesn't fit, can't be used.*" Setting a test form apart on Table 1 or holding it in the hand appears to reflect an idea that does not fit the goal aimed at; yet it is an idea that the subject cannot give up even though it is unreasonable.

Occasionally a subject proceeds to identify test forms on Table 1 after he has finished his Story. *If he does this without* making some comment such as, "my story is finished," count these test forms as Added. These test forms, like those held in hand or set apart, are generally irrelevant to the main theme.

*Example 1.* W. S., a 38-year-old alcoholic man, selected test forms #21, #16, #17, #5, #6 and #12, set them into a design on Table 2. After explaining the significance of his design, he picked up test form #11 and said, "This could be her toilet so I guess I'll put it in too." Here 6 test forms were Selected, and 1 test form was Added.

*Example 2.* C. H., an 11-year-old girl (normal sample), selected test form #1 and stated that it was a rectangle. Then, in spite of repeated directions, she proceeded to select test forms singly as she described their geometric features. Here test form #1 is counted as Number of Test Forms Selected; all others are counted as Number of Test Forms Added.

*Example 3.* M. N., a 48-year-old woman, paranoid schizophrenic, selected test form #1 and explained it as "symbolic of the foundation of life." She then proceeded to introduce each other test form, identifying each as "symbolic" of some aspect of "life." Here test form #1 is counted as Number of Test Forms Selected; all others are counted as Number of Test Forms Added.

*Example 4.* P. G., a 35-year-old man, paranoid schizophrenic, selected test form #17 and described it quite fully, then proceeded to pick one test form at a time describing each test form as he placed it on Table 2. Here again is the selection of one test form and the addition of others.

*Example* 5. R. D., a 21-year old man, paranoid schizophrenic, selected test forms #12, #21, #1, #2 and #4 and placed them on Table 2. He combined #1, #2, and #4 into a building and placed #12 near it, forming a design and said "mother and child near White House." He ignored #21 altogether. He then took #5, #6, #9, #8 and #3, and tried several constructions on Table 1; when satisfied, he moved his structure a bit apart from the rest and called it "Persia."

Here test forms #12, #21, #1, #2 and #4 are counted as Test Forms Selected, while #5, #6, #9, #8, and #3 are counted as Test Forms Added. These five forms in one structure called "Persia" will be scored also as an Isolate Idea and as Isolate Manipulations (described below). Test form #21 will be scored as an Isolate Manipulation only, since it was not identified verbally.

## GESTURE REACTION TIME

Gesture Reaction Time (GRT) refers to the time that elapses from the end of directions given by the examiner to the moment the subject reaches for a test form. This time interval is recorded in seconds.

## VERBAL REACTION TIME

Verbal Reaction Time (VRT) is the time that elapses from the end of directions given by the examiner to the first word spoken by the subject. This time is also recorded in number of seconds. Verbal reactions are expected to take place after the subject has selected his test forms and placed them on Table 2. Consequently it is expected that this reaction time (VRT) would normally be somewhat longer than the GRT. However, some subjects begin to verbalize before they touch the test forms, and some verbalize before the directions are finished. In the last instance record reaction time as spontaneous.

### RATIO BETWEEN GESTURE AND VERBAL REACTION TIME

As was indicated above, the Verbal Reaction Time is expected to be somewhat longer than the Gesture Reaction Time. If the ratio is inverse, i.e., gesture is greater than verbal; or if the ratio is equal, it is apparent that the subject did not adequately follow directions given. If there are no gestures and/or no verbalizations, no reaction time can be recorded, and this amounts to 0, which is obviously a deviation.

### TOTAL TIME FOR PRODUCTION

Total Time (TT) is the time that elapses from the end of directions given by the examiner to the end of the subject's response to these directions. This includes his entire Production, verbal and manipulative. Total Time is recorded in minutes. Obviously, if the subject begins his Production before the directions are finished, count the time from the moment the subject begins his Production.

### TOTAL NUMBER OF WORDS IN PRODUCTION

Number of Words in Production includes all verbalizations given during the Production in contrast to the word count in the Story. In view of the directions given, one would expect the Total Word Count and the Story Word Count to be equal. However, this was not always the case in many of our normal records. Some normal subjects as well as some patients give much verbal elaboration to the identification of test forms before giving a Story relating the test forms. Such verbalizations, given before the Story proper, appear to reflect mobilized anxiety which impairs the subject's ability to delay verbalizations for goal-directed ideation. It is likely that a measure of the degree of anxiety experienced may be obtained from the difference between the Number of Words in the Production and the Number of Words in the Story. All verbalizations, including apologies, protests, reservations, criticisms, as well as the Story proper, are counted in the Number of Words in Production. This word count in itself may serve as an index to drive fluidity, rigidity, anxiety and/or depression.

### NUMBER OF WORDS IN THE STORY

To obtain the measure of the Number of Words in the Story, count the words given by the subject *as his story*. Thus if the subject *identifies test forms as he selects them and then goes on to give a Story, do not include here the words given during the selection of the test forms*. However, if the subject identifies test forms as selected *but gives no further Story*, thus indicating that he believes he has fulfilled the requirements, count these verbalizations in the Number of Words in the Story.

If a subject identifies the test forms as he selects them and *then unites the test forms in a general category or in some other blanket manner, count the identifications thus given as part of the Story and include them in the word count, unless the subject indicates that the Story was limited to the generalization.*

When the subject selects and identifies test forms but protests, "*I can't give a story,*" count the words in the identifications as part of the words in the Production, *but not as part of the Story. In this case the word count in the Story is zero.*

The word count in the Story is also 0 when the subject selects test forms and places them on Table 2 but makes no identifications.

When a subject gives more than one Story in response to a request for a story, count the words given in the *total stories* as one total and record in this category, since the "stories" given represent the subject's response to the stimulus, "give me a story." Also, when a subject treats each test form selected, discretely, yet insists he gave a story or stories, count the words in these identifications as the Number of Words in the Story.

*Example 1.* Where the subject insisted he gave a story yet treated each test form discretely.

R. S., a 52-year-old man, married, involutional depressive, described his selected test forms as follows: #21, "This particular individual holding a piece of wood wants to break it or wants to stretch his arms out." #20, "This is an animal holding onto something." #19, "This is a shoe or foot." #13, "This is the same identical form, military type of shoe." #10, "This is a horn made of brass."

These identifications were given as the subject selected his test forms and were repeated when the examiner asked, "And your story?"

These identifications are counted once for the Story word count which totals 50 words. For the Production Word Count the words in his original identifications as well as in the repeated identifications and his statement "I gave a story," are all counted, totaling 104 words.

*Example 2.* Test forms are selected, placed on Table 2 and identified, and then the Story is given.

F. S., a 17-year-old boy, single (normal sample).

#10, "snake"; #7, "mountain"; #3, "cow"; #2, "road"; #6, "sleeping bag – rolled up."

*Story:* "I was on a trip out West putting up for the night [#17]. A mountain on side of road [#2]. I left the car [#3] on the road, went to sleep in a sleeping bag [#6], woke up in the morning and found a snake [#10] next to me."

Here the Story word count is 42; the Production word count is 49 for it includes the words in the identifications.

*Example 3.* Subject selects test forms, places them on Table 2, but gives no verbalizations except, "I can't tell a story."

Boy, 11 years old, selected test forms #10, #21, and #9, placed them on Table 2 and, crying, said "I can't tell a story."

Here the Story word count is 0, while the Production word count is 5.

*Example 4.* Subject identifies test forms as she selects them, and then relates them in a general category.

F. C., a 35-year-old woman, married, alcoholic, psychotic, called test form #21 "primeval man"; #20, "don't know"; #16, "Tree I guess"; #17, "don't know"; #19, "form of rock"; #12, "woman"; #1, #2, #3, #4, "stones of ancient days." When all selected test forms were on Table 2 she said, "This would be a museum with these figures in it, all on exhibit."

When Examiner asked "Your story?" subject said "I told you"; then, pointing to forms #2, #1, #3 and #4, she elaborated, "rare rocks, used for building."

Here the inquiry disclosed that the subject intended her complete performance to be her story, so that the Story word count includes all words except the statement "I told you," or a total of 35 Story words and 38 Production words.

*Example 5.* G. G., a 41-year-old man, married, alcoholic, psychotic, selected test form #20 and described it as "two people at altar kneeling and praying, dirt and debris on altar." He then added fifteen more forms each of which he identified and said, "All reminds me of an old drawing, features not clear."

When the examiner asked, "And your story?" the patient proceeded to reidentify some of his test forms with elaborations and combine others into several themes.

Here the original identifications of test forms are not counted as part of the Story. Only the verbalizations given after examiner asked, "And your story," are included in the Story word count. All the other words given as he selected his forms are counted, however, in the Production word count.

### DIFFERENCE BETWEEN NUMBER OF WORDS IN THE PRODUCTION AND NUMBER OF WORDS IN STORY

The Number of Story Words subtracted from the Number of Production Words provides a difference which, as was indicated earlier, appears to be an index to mobilized anxiety.

### TOTAL NUMBER OF NOUNS IN THE STORY

In this category all nouns used in the story are counted. When nouns are used repeatedly, each repetition is counted as a separate noun. This count includes nouns used as subjects, objects or possessive case, i.e., "the man's hat," where both "man" and "hat" are counted as nouns. Compound words such as *sleeping-bag* are counted as *1 noun.* Personal and impersonal pronouns *are not counted as nouns.*

### NUMBER OF DIFFERENT NOUNS USED IN THE STORY

In this category each noun used by the subject is counted only once, no matter how many times it is repeated either as a subject or object, or in the possessive case. The Number of different Nouns used may serve as an index to richness or poverty of ideational *expression*, while the difference between the *Total Number of Nouns* and the *Number of Different Nouns* may serve as a measure of perseveration. It was expected that the Number of Total Nouns and Number of Different Nouns would be about equal in normal records.

*Example 1.* Where one noun is repeated for a series of events.

M. N., a 48-year-old woman, married, paranoid schizophrenic.
#16, "*Man's* first conception of Deity"; #20, "*Man's* ability to build temple"; #13, "*Man* beginning to show woman they have some importance"; #21, "*Man* realizes his power"; and so on through 28 forms.
Here the subject is credited with the noun *man* only once in the count of *Different Nouns,* but is credited with every repetition of "man" in the count of Total Nouns.

*Example* 2. Where a noun is used as object and directly after is repeated either as object or subject, the repetition of the noun is not counted.

F. C., a 35-year-old woman, married, alcoholic (psychotic): "I was baking [selected #26, #27, #28] cookies [#1 and #2] *bread* and *cake*. These are *cookies, bread and cake.*"
Here "cookies, bread and cake" are counted once each as nouns in category Number of Different Nouns; but all these repetitions of nouns are counted in the category Total Number of Nouns.

*Example 3.* Where one object is repeated in a series of actions, the object is counted once in the category, Number of Different Nouns.

K., a 52-year-old woman, married, paranoid schizophrenic. "Mary saw the *boot* in the *window* . . . Bill sold her the *boots.*"

Here *"boot"* is counted once in this category Number of Different Nouns.

### NUMBER OF DIFFERENT ADJECTIVES IN THE STORY

Each adjective used is counted only once, no matter how many times the subject repeats the same adjective. Adjectives include not only words that describe a quality of a noun, whether an innate characteristic or an assigned one, but they also include *participles that modify nouns* (the smiling girl), also words that describe the range or spread of the object such as *any, all, few;* also words that specify a thing as distinct from others, such as this, that, these, those; also possessive pronouns, such as *their* house, my, his, hers, ours, mine, yours, etc. Adjectives reflect richness of language and indicate ability to abstract characteristics from a concept, to recognize similarities and differences. Their use in childrens' speech comes after the use of nouns, verbs and pronouns (83, p. 37). The Number of Different Adjectives used may serve as a developmental as well as a creative index.

### NUMBER OF DIFFERENT ADVERBS IN THE STORY

Each adverb is counted only once, no matter how many times the subject repeats the same adverb. Adverbs may modify a verb, an adjective or another adverb. Most adverbs are formed by adding "ly" to adjectives, participles, nouns – e.g., highly, laughingly, purposely. In the phrase, *"dazzling white sweater,"* *"dazzling"* is an adverb, *"white"* is an adjective, and *"sweater"* is a noun. Adverbs emerge in children's speech later than adjectives (84, pp 49-50), thus they serve as an index to a more advanced developmental level as well as a further index to richness of speech and creative ability.

### TOTAL NUMBER OF VERBS IN THE STORY

All verbs used in the story are counted in this category. When a verb is repeated, each repetition is counted as a separate verb. Included as verbs are infinitives (to be, to go, to do, etc.), participles when used with an auxiliary verb, such as "the boy *is running*." Participles that modify nouns are classed as *adjectives, i.e., "the running boy."* Auxiliary verbs such as have, be, do, let, shall, will, ought, may and conditional tenses, such as would, could, might are included each time used.

### NUMBER OF DIFFERENT VERBS IN THE STORY

In this category each verb used is counted only once, no matter how many times it is used in a Story.

The Number of Different Verbs used may serve as an index to flexibility or rigidity of action urges. This measure may reflect the degree of freedom an individual has for actively relating ideas, and, as such, it may be a useful index to depression and/or repression.

The difference between the Number of Different Verbs and the Number of Total Verbs may reflect a helpless perseverating urge to an action, a compulsive urge to an act, repression of action urges, excessive action urges, or a free but balanced action urge.

*Example 1.* M. M., a 37-year-old man, married, alcoholic, neurotic, gave the following Story: "On the *lawn* [placed #21 on Table 2] *is* a man *exercising*. This [placing #10] *is* a hose on the *lawn*. These [placing #12, #16, #19] *are* statues on the *lawn*.

In the above example, the verb, "*is*," should be counted only once. This example also serves to illustrate the perseverating use of the noun, "lawn."

The Ratio Between the Number of Different Nouns and the Number of Different Verbs may serve as an index to the manner in which an individual relates to his environment. Since nouns are static symbols and verbs are action symbols, it is likely that an individual who uses *many more Different Nouns than Different Verbs* relates in a static way to his environment. He needs to observe it, touch it, reassure himself of reality; he dare not interact with it; he must inhibit his actions. On the other hand, the individual *who uses many more Different Verbs than Different Nouns may very likely relate to his environment actively – interacting with it spontaneously or impulsively.* He discovers his environment by its effect upon him in response to his activity, rather than by passive observations or passive contact.

An optimum ratio between these two variables would appear to reflect a good balance between delay for observation and ideation and translation of the ideation into action. This would be an individual who observes and perceives his environment and conceives it in terms of interacting with it toward a desirable goal.

### VERB TENSE

Verb tense appears to serve as a discriminating index to adjustment in children (150, pp. 40-41). It is therefore likely to serve as a discriminating index to adjustment and level of maturity in the different population samples.

The verb tenses are identified as follows (9, p. 134):

*Present* – which expresses *action* or *being* in the time that is going on now, or the time of speaking, such as: "I *see* you." Present also refers to habitual action or general truth, such as: "The sun *shines every day*." The present infinitive, *to be, to do, to go,* are also classified as present and the present participles *going, doing, sewing* and *running* are classed here.

*Past* – which expresses time gone by, whether in reference to a specific time or to continuous time gone by, e.g., "He *was* there"; "He *has* been here"; "He *had* been here"; "*It happened last May*"; "*It was a daily occurrence*"; "It *used to be a daily occurrence.*"

*Future* – which expresses *time yet to come* whether the event will occur soon, or in distant time, such as: "We *shall go soon*"; "I *will see* you later"; "He *will be there* on time"; "In *generations to come*"; etc.

*Imperative* – which expresses a command expecting obedience now or in the future. Imperatives are generally terse, harsh and in the present or future tense. However, they are classified as imperative when they carry the quality or tone of a *must.*

*Conditional Present* – which expresses the idea that an event is expected to occur in the present time if some other condition or event is fulfilled. The conditional present always includes the words should or would, e.g., "He *should be here* by now if he made the right plane"; "She *would* do it if she *were well.*"

*Conditional Past* – which expresses the idea that an event had been expected to occur in the past if some other condition had been met, or some other related event had occurred, e.g., "He *should have been here* an hour ago but the train was late"; "She *would have done* the work *had* she *been* well enough."

Some subjects are so withdrawn or depressed that they cannot use verbs, in which case no verb tense can be credited. Other subjects combine several tenses in a logical sequence of events, in which case each tense used is recorded, e.g., "When he *finishes raking* the leaves, he *will go* in for dinner." Here "*finishes*" is present tense and "*will go* in for dinner" is future, and they follow each other logically.

However, some subjects combine tenses illogically so that the meaning is confused, in which case their Verb Tenses are recorded, but in addition the sequence is *recorded* as *illogical.*

*Example:* S. K., a 52-year-old woman, married, paranoid schizophrenic, told the following Story: "Strong man *saves* child from a snake. He *had performed* many fine feats of strength, *had won* prizes in strength contest, so famous sculptor *had dedicated* monument in his behalf. This *was* huge in strength contest, he *picks* it up."

The first verb, "*saves*," and the last verb, "*picks*," are in the present, while the other verbs are in the past. The subject is credited with present and past tense usage. However, since the particular combination here confuses the meaning, it is scored illogical.

### TIME PERSPECTIVE

Time Perspective, as used here, refers to specific periods in the history of the world. Time Perspective may be explicitly stated in such terms as *19th century, 1890's,* the pre-present era, since 1920, during the 30's, ancient times, prehistoric period, Biblical days, medieval period, and other such definitive descriptions of time. It may be indicated by the names of persons or places or events such as World War I, Revolutionary War, George Washington, the World's Fair, the Museum of Natural History, Pharaoh's Tomb, Moses, Greta Garbo, Jesus, a primitive country, etc.

Still another way in which Time Perspective may be indicated is by description of utensils, furnishings, or clothes, such as: stone implements, table, chair and rug on floor, knickknacks on table, woman in bustle with puffed sleeves, and flower hat.

Where more than one Time Perspective is indicated, each one is recorded. It is expected that the use of several Time Perspectives in one story will be found only in some of the very sick populations. It is further expected that adult use of Biblical, prehistoric, eternal or mythical time, is indicative of varying degrees of maladjustment. Some subjects give no indications of Time Perspective, in which case Time Perspective is scored as vague.

An example of multiple Time Perspectives is seen in the production given by R. W., a 42-year-old, catatonic schizophrenic woman, who told a Story about *Jesus, Mary,* and *Greta Garbo, a man who lived in a cave,* and *Indians.* Here the Time Perspectives include *Biblical, Prehistoric, 18th,* and *middle 20th* century (contemporary).

Another example of multiple Time Perspectives is seen in the production given by E. N., a 47-year-old woman, single, paranoid schizophrenic, who stated, "prehistoric man, an embalmed woman, a monkey, and a woman in bonnet, bustle, nipped waist brought up out of earth—excavations." Here we have *prehistoric time, ancient time* and *early 20th century* — 3 Time Perspectives in one Story.

### LITERARY STYLES

Literary Styles used by subjects in 3-DPT Stories are classified into five categories: Naming, Exposition, Free Association, Description, and Drama. A subject may use only one of these styles, or any combination of these styles. All styles used should be credited.

*Naming* is recorded when test forms are selected and named, no effort being made at elaboration, such as Description, Drama, Exposition, or Free Association. If, however, a subject selects and names test forms as he places them on Table 2 *and then proceeds with a story, do not count the naming of the test forms* as *Naming*. The naming of test forms prior to producing a Story seems to be a thinking-aloud process rather than *constriction of ideation* which *pure Naming* represents. In *pure Naming* the individual cannot combine test forms because associations are fraught with unbearable emotions.

Sometimes a subject is able to give a Story using Exposition, Description or Drama; yet he *also Names one or more test forms without in any way elaborating* these forms *or integrating* them with the Story. In these cases, the *Naming* as well as the *other Literary Styles used are recorded.*

*Example 1.* Pure Naming
R. S., a 31-year-old woman, married, catatonic schizophrenic, selected test forms #1, #16, #3, #21, #8, #9, #7, and #4, and Named them as she placed them on Table 2, thus: #1, "soap"; #16, "elf"; #3, "block"; #21, "don't know"; #8, "ball"; #9, "ball"; #7, "Trylon"; #4, "Triangle." When reminded about a story, she said, "I don't understand. I already told you." This "story" is credited with only Naming.

*Example 2.* Naming and Description
R. S., a 67-year-old woman, married, with psychotic depression, selected forms #16, #12, #9, #21, #8, and #1. She then called #16, "church'; #12, "man"; #8, "marble"; #9, "marble"; #21, "Samson"; #1, "soap." Then holding #8 on #21, she said, "This is Hercules carrying the world on his shoulders."

Here forms #16, #1, #12 and #9 were just *named*. But forms #8 and #21 were related descriptively. This Story is thus credited with Naming and Description.

*Example 3.* Naming and Description
R. S., a 52-year-old man, married, with psychotic depres-

sion, selected forms #21, #20, #19, #13 and #10, then identified them as follows: #21, "This particular individual holds a piece of wood, wants to break it or wants to stretch his arms out"; #20, "This is an animal holding on to something so he won't fall down, otherwise he'd fall down"; #19, "a shoe"; #13, "a military type of shoe, identical with other"; #10, "a brass horn."

Here responses to #21 and #20 both reflect dynamics, a struggle, yet do not indicate that any change resulted from the action described. Therefore these responses are scored, Description; #19 is scored, Naming; #13 and #10 are scored, Description.

*Exposition* is recorded when the material is presented in a pedantic style; it intends to teach a lesson; it presents a value system which may be moral, ethical, artistic, legal, theoretical, scientific, mechanical, social, or other.

*Example 1.* P. D., a 32-year-old man, single, paranoid schizophrenic, selected forms #14, #19, #20, #24, #25, #26, #27, #28, #23, and #22. Then, as he developed his theme, he added forms #21 and #17. He then began to arrange his forms into a design as he said, "The story I am *writing* now *is a lesson on how to set up a tropical fish tank*. Take away #21 and #17 because they are too much. This is a mistake beginners make. I did it purposely so that they'd see the mistake before it's made and would understand the importance of balance in setting up a tropical fish tank . . ."

The major style here is Exposition. Description is also recorded here to account for "tropical fish tank."

*Example 2.* J. G., a 47-year-old man, married (normal sample), selected forms #1, #2, #3, #4, #5, #8 and #7, and said, "These are the basic parts we build with. I am a *professor of architecture and I'm explaining the art forms to the students*. We can use this form [#1] as a base and we can put these forms all together and build a tugboat. I can also use this [#5] and this [#4] and combine them for a buoy. *Thus with these forms, I can demonstrate the principles of construction.*

The Literary Style of this presentation is obviously Exposition.

*Free Association* is recorded when a test form or forms touch off emotionalized ideas, attitudes and experiences which are reported by the subject. Sometimes a subject gives Free Associations during the development of a Story, i.e., the memory is so forceful, he cannot inhibit it from expression even though it does not fit logically into his Story theme. At other times Free Associations are given after the Story is done. These Free Associations are also recorded in this category unless the subject clearly indicates that these Free Associations are not part of the Story, i.e., they are parenthetical.

*Example 1.* G. K., a 26-year-old woman, single, catatonic schizophrenic, selected forms #7, #9, and #14, and after placing #7 and #9 near each other and calling them "the World's Fair," she said, "As far as this one [#14] false teeth are concerned, I remember my father had false teeth, and when he was in the hospital, he almost choked on his teeth because they forgot to take his teeth out."

Here we have *Naming and Free Association.*

*Example 2.* H. B., a 41-year-old woman, married, anxiety neurotic, described form #20, as "a child stretching to look over the table-top," then went on, "It could be my child who is two years old and he does this, and it makes me very angry, and I yell at him for doing it and then I'm sorry."

Here "stretching to look over table-top" is recorded as Description, while her observations about her own child are recorded as Free Association.[1]

*Example 3.* A. L., a 51-year-old man, married (normal sample), selected forms #3, #11, #10, #8 and #19, then used each form to relate a pleasant memory, thus: #11, "Reminds me of a toilet seat. At night I love to take my baby daughter and put her on her toilet seat; we sing a song, then applaud. It also reminds me about our downstairs toilet seat —it gets off its hinges." #3, "When we go into a delicatessen and see *halvah,* I always have to take a knife and chop a couple of nice cubes off and eat them. . . ."

Here is *Free Association and Description.*

*Example 4.* W. H., a 55-year-old man, married, paranoid schizophrenic, selected forms #12, #16, #7, #8, #9, #10, #17 and #21, and developed a dramatic scene at the World's Fair. When he finished his story, he said, "This reminds me of when we were first married, we used to go to the World's Fair."

Here we have *Drama and Free Association.*

*Description* is recorded when objective and/or subjective characteristics of a test form are elaborated, or when several forms are combined in a setting or structure and the relationship is elaborated upon. Elaborations may pertain to structure, function, texture, mood, time, place, and number.

*Example 1.* T. R., a 52-year-old man, married (normal sample), described #7 as a "*clay hut.*"

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[1] Incidentally, it is noteworthy that H. B. gave an inappropriate design (See page 53, *Example* 8.) pertaining to her child which suggests that her perspective of her child's behavior is distorted. This impression appears to be validated by H. B.'s own observations reported above.

*Example* 2. A. L., a 51-year-old man, married (normal sample), described #21 as "an *old gentleman.*"

*Example* 3. B. O., a 44-year-old man, married (normal sample), described #17 as "a *beautiful lady who was sad and dejected.*"

*Example* 4. O. F., a 44-year-old man, married (normal sample), described #21 as "*a strong man.*"

*Example* 5. H. E., a 39-year-old man, married (normal sample), arranged forms #16 on #1 and #12 on #2, and called them "*Chinese figures on bases.*" He then arranged these with forms #5, #10 and #4 into a design and identified it all as "*our living room.*"

*Example* 6. M. B., a 42-year-old woman, married (normal sample), included form #20 in a scene and described it as "a little animal, a pet, standing up against a rock, foraging for food."

Here we have Description, *not Drama,* since Drama calls for a change in the situation, agent, or object as a result of the action described. No change is indicated by the action described in this example.

*Example* 7. H. B., a 41-year-old woman, married, anxiety neurotic, related #21 and #12 as follows: #21, "This is the form of a man, but it could be just a person in protest. It represents my feelings of protest, and this art form [#12] represents my softness, femininity."

*This is Description.*

*Drama implies action leading to a change of conditions. Thus Drama is scored when a concept is presented in action or two or more concepts are related through action, and the action produces a change within the concept(s) and/or the situation(s).* When the action word *does not* produce or imply a change in the concept(s) and/or situation(s), it is scored as Description.

*Example 1.* B. O., a 44-year-old man, married (normal sample): "The man [#21] sat down on the bench and the woman [#12] walked over and sat beside him."

Here the action words, "*sat down*" and "*walked over*" changed the position of the people involved and changed the situation. This is plainly *Drama.*

In contrast is the following statement made by D. L., a 33-year-old single, catatonic schizophrenic woman: "The man [#21] and woman [#12] are seated on a bench [#1]."

Here "stretching to look over table-top" is recorded as so this is scored as *Description.*

Sometimes the material sounds dramatic but careful scrutiny discloses that no change was effected by the action word(s). A case in point is that of C. B., a single, 27-year-old paranoid schizophrenic man, who selected #20 and said: "This figure is *emerging from this one, it is vibrant, trying to break free.*"

Here the word, "emerging," suggests that a change will follow; but the change is blocked by the "trying to break free." Therefore, this is scored Description, *not Drama.* Scoring of Drama should be distinguished from scoring of human, animal and inanimate action, overt or latent. These specific types of action are recorded for each test form used by the subject when the Stories are examined for content variables.

### NUMBER OF BUILDING CONSTRUCTIONS

A Building Construction is a structure wherein the subject combines two or more test forms so that the test forms are in *direct contact* with each other. It matters not whether they are placed on top of each other or side by side; as long as they are in *contact*, it is classified as Building.

Since the human need for direct contact as a sign of acceptance diminishes with maturity, it is likely that Building is an index to level of maturity. Furthermore, since immaturity implies insecurity, excessive Building and/or Number of Forms Used in Building may serve as an index to the degree of insecurity. (The Number of Test Forms Used is treated as a separate variable.) The content of the structures and the adequacy of the structures may serve to indicate the direction of the individual's striving for security and the appropriateness of his efforts respectively. The Number of Test Forms Used for Building are recorded when content and manipulation variables are applied to each of the 28 test forms.

*Example 1.* A. F., an 18-year-old girl, single, hysteric neurotic, placed #17 on #1 and leaned #10 against #1.

This is classified as *1 Building Construction.*

*Example 2.* A. F. (same as above), in her Postnaming Production placed #21 on #1 and #17 on #2.

Here are 2 *Building Constructions.*

Sometimes the subject attempts to build a structure but the test forms he tries to combine cannot support each other, so the subject holds the test forms together manually. Whether he continues to hold the test forms together or sets them down as he goes on with his Production, these attempted structures are counted as Building Constructions.

*Example 3.* R. S., a 67-year-old woman, married, with psychotic depression, called #21, "Atlas" and, holding #8 on shoulders of #21, said, "Atlas carrying world on his shoulders." She then put #8 down and went on to the next test form.

*Example 4.* H. B., a 43-year-old woman, alcoholic, neurotic, held #3 on #19, and #12 on #3, using both hands to maintain the structure as she developed her ideas.

Sometimes the subject tries to combine two or more test forms into a structure, is not satisfied with the structure, so tries them in another way. In these cases each effort is counted as a Building Construction. Subjects who make several attempts at building appear to be reflecting their unsuccessful reality efforts to obtain security from the environment.

*Example 5.* H. B. (same as above), held #12 on #19 but did not think it was pretty enough, so tried to hold #9 on #19, and #12 on #9. This was also rejected. Then she held #3 on #19, and #12 on #3, and this suited her.

In this case all 3 Building efforts are counted.

It is noteworthy that after the testing was over, H. B. volunteered the following: "I have been trying *viciously* to establish roots for myself in this community. I've tried so hard that I've ignored my family and friends. *I think I have a veneer but way down deep I need warmth and love.*"

These comments suggest that her building efforts reflected her real efforts to manipulate the community in order to obtain the security she needed. Thus it seems that subjects who make *several efforts* at building actually reflect their real unsuccessful efforts at gaining security from their environment.

### NUMBER OF DESIGN CONSTRUCTIONS

Constructions are called Design when the forms are related spatially but are *not* in *contact* with each other. In

Design Construction, size and form, as well as spatial relations may be emphasized. Design Construction in the 3-DPT appears to be comparable to vista responses in the Rorschach and as such may serve to indicate the degree of sensitivity in person-to-person relationships.

> The vista response represents a sensitivity to spatial relationships between the self and the environment and is in this sense an evaluative reaction . . . it is associated with the ability and tendency to stand aside, as it were, and judge the implications of one's actions in relation to others. The vista response is a reflection of an inhibitory function, which, if excessive, results in a crippling of initiative largely through a sense of powerlessness and inability to compete. Because the capacity for self judgement does not reach fruition until mature adulthood, V may be used as a measure of maturation. . . . To the extent that self judgement is requisite for insight, the V response may be taken as an index of the capacity for insight, that is, the V response implies the existence of both a judgmental "I" and an acting or behaving "I" [170, p. 98)].

In like manner, design seems to reflect an individual's tendency to evaluate his own behavior in relation to others' attitudes. Thus the Number of Designs as well as the Number of Test Forms Used in Design may serve as indices to mature capacity for self-evaluation and insight. Excessive use of test forms in Design, i.e., beyond normal expectancy, might then indicate a hypersensitivity about one's relation to others leading to "crippling of initiative." Use of several designs in one production might reflect considered efforts to resolve difficulties with uncertainty about the effectiveness of the methods. Such uncertainty might reflect a conflict that could cripple behavior.

*Example 1.* D. L., a 33-year-old woman, single, catatonic schizophrenic, arranged forms #10, #4, #21, #8, #9, #3, #5, #12, #18, #13, #22 and #23 and #1 into a "beautiful idyllic garden scene where man and wife are entertaining guests on Sunday afternoon, serving food and drinks."

*This is a Design in which 13 forms were used.*

*Example* 2. D. G., a 31-year-old man, married (normal sample), arranged forms #4, #7, #19, #13, #22 through #25, into a design representing "desert." Then he placed forms #20, #17 and #21 into a design called "jungle."

*Here we have 2 Designs* with a total of 11 test forms.

*Example* 3. T. F., a 20-year-old woman (normal sample), arranged test forms #13, #16, #8 and #10 and called it a "garden scene." Then she arranged #18, #26, #27, #28 and #19 and called it a "field." Then she arranged test forms #20 and #22 and called it a "graveyard."

*Here we have 3 Designs* with a total of 11 test forms.

The case history material of the two normal subjects with more than one Design in a Production supports the impression that use of several Designs *reflects* efforts at resolving difficult personal and/or social relations, problems and situations. D. G., a 31-year-old man, disclosed that he was having difficulty obtaining a deserved promotion in his firm. He felt very frustrated. He had applied for a promotion but was refused. Since he needed more money to support his family he took a night job in addition to his daytime job. He found that the two jobs were a strain on his health which in turn affected his work on both jobs. Thus, he was faced with the problem of making a choice between the two jobs, neither of which would fulfill his security and status needs.

T. F., a 20-year-old girl, reported that her father doesn't permit her to go out with young men; he doesn't trust the young men. T. F. is caught between the pleasures of dating young men and her fear of her father's wrath. She goes out surreptitiously but is in constant terror of discovery.

Here, as in Building, the Number of Test Forms Used are recorded when content and manipulation variables are applied to each of the 28 test forms.

### NUMBER OF SORTINGS (CONCEPTUAL CLASSIFICATIONS)

Sortings or Conceptual Classifications describe the performance when test forms are verbally identified as belonging to a general class or category of object. The similarity between concepts may be abstract or concrete, i.e., the similarity may be based on structure, function, time, place, or combinations of these factors.

*Example 1.* G. R., a 30-year-old man, married (normal sample), classified forms #1, #2, #3 and #4 as representing Egyptian architecture, and forms #21, #12 and #17 as family members.

Here we have 2 Sortings or Conceptual Classifications.

*Example 2.* M. N., a 47-year-old woman, married, paranoid schizophrenic, classified all 28 forms as symbols of man's development; then she called forms #1, #2, #3, #4, #5, #6 and #10 "books."

Here are 2 Sortings or Conceptual Classifications.

*Example 3.* E. N., a 47-year-old woman, paranoid schizophrenic, classified all 28 forms as children's art work and forms #21, #17, #16 and #12 as relics of a past civilization.

Here again we have 2 Sortings or Conceptual Classifications.

Although the test directions at no time call for Sortings, some subjects in all groups tested, classified some test forms on the basis of one or more similarities either concrete or abstract. The ability to abstract similarities is tested by the Similarities Test in the Wechsler (237, pp. 85-87) and is the major intellectual process tested by the Goldstein and Sheerer Sorting Test (178). Both of these sorting tests provide clear-cut indices to organic psychopathology and to the schziophrenias. It is expected that in the 3-DPT the type of conceptual and test form sortings made voluntarily by the subject will serve as index to certain types of psychopathology.

### MANNER IN WHICH TEST FORMS ARE MOVED AS STORY DEVELOPS

Some subjects move the test forms about to dramatize the events they are developing in their Stories. Other subjects move the test forms simply as a means of punctuating the identification of test forms. Still other subjects move the test forms about experimentally, trying various combinations as they develop their Stories. Still other subjects move the test forms in a seemingly random manner.

In this category movement is recorded only if the test forms *are moved about as the Story is developed*. Movement of test forms does not apply to the transfer of test forms from *Table 1 to Table 2, except when* the *selection* is *made during* the *Story-telling. If the subject rejects forms during the Story, moving them back to Table 1 or to another spot on Table* 2, Movement is recorded.

When the Building or Design is arranged *before the Story is begun,* these movements are not recorded as *Movement;* but when the Building or Design is *made as the Story develops,* then the particular types of movement(s) displayed are recorded.

Some subjects display more than one type of Movement in which case each type of Movement used is credited.

In all cases where test forms are moved in one way or another, *during the Story-telling,* the Movement is likely to reflect a need to manipulate the environment in an effort to fulfill needs. The different types of Movement may serve as indices to the *way* in which a subject acts out his needs.

Movement of test forms is classified as follows: (1) No movement; (2) forms are touched only as an aid in identification; (3) Human Role Playing; (4) forms are moved in random manner; (5) Animal Role Playing; (6) forms are rejected manually; (7) Inanimate Role Playing; (8) forms are moved into Design and/or Building; (9) forms are *moved* as an aid in identifying; (10) forms are moved about experimentally.

*Human, Animal* and *Inanimate Role Playing* must be acted out by the subject with test forms to be scored here. These dramatizations should not be confused with verbalized dramatic incidents where the test forms are not moved to portray the drama depicted.

*Example 1.* Movement of test forms to depict Human Role Playing.

H. K., an 18-year-old boy, single (normal sample), arranged a series of forms in a design *before beginning his Story.* He then called his scene a "park." Then, *as he told his Story,* he "walked [#12 and #17] mother and child" through the park and "on toward home."

In this case the arrangement of the Design is not scored because it was done before the Story was begun, but the "walking" of the forms out of the park is scored under Movement as Human Role Playing.

*Example* 2. An example of Inanimate Role Playing was given by the same subject, H. K., in his Postnaming Production. In this case, before telling his Story, he arranged a design and called it, "the solar system." Then he said: "A rocketship [#7] with two fellows in it land on the moon" [#8, "moon"; #9, "earth"]. He then moved #7 swiftly toward the moon (#8) to dramatize the flight from earth to the moon; then he moved #7 away from the moon (#8) and swiftly moved it on to #10, describing his actions, "the rocketship started back for earth but something went wrong and it crashed into a crater [#10]."

Here both actions dramatized are classed as Inanimate Action for both actions were due to mechanical forces.

Inanimate Action refers to action due to mechanical or natural forces such as gravity, electricity, rain, wind, fire, storm, etc.

Anthropomorphic action, i.e., human or animal actions attributed to inanimate objects, should be scored as intended by the subject, i.e., as Human or Animal Role Playing.

*Example 3.* Movement of forms to depict Human Role Playing.

E. L., a 23-year-old woman, married, paranoid schizophrenic, picked test form #7 and called it a knife, picked test form #10 and called it a snake. Then she attempted to pierce #10 with #7 explaining, "I plunge the knife into the snake."

*Example 4.* Movement of test forms for Building and Design as well as Human Role Playing and Experimentation.

A. W., a 38-year-old woman, married, paranoid schizophrenic, selected test forms #13, #19, and #20, #22, #23, #8, #1, #7 and #11. Then she placed #22, #23, and #8 on #1 and said, "Two men on a boat; wait let's do this." Taking #23, #22, and #8 off #1, she put #7 on #1, and #22, #23, and #8 were put on #2. Then she went on, "This boat is sinking. The two men on a small boat throw their anchor [#8] on shore." Here she placed #19 and #13 close together, #20 behind these at some distance, and #11 behind #20 at some distance. She then moved #8, "the anchor," from the boat (#2) to #19 and #13, which together were called "a rock formation," added #4, #5, and #6 one on top of the other, and called this structure a "distress signal." She then went on, "The men save themselves, they were hungry, caught a sea lion [#20], ate it, then made a bed. This [#11] is the pillow, and made a distress signal."

*Example 5.* Forms moved as aid in identification.

C. B., a 29-year-old man, paranoid schizophrenic, selected forms #12, #21, #20, #16, #14, #17, #22 and #23 and placed them on Table 2. Then as he developed his ideas on each test form, he moved it about as though to punctuate the identification.

*Example 6.* A test form is moved back and forth in a seemingly random manner.

R. C., a 41-year-old man, married, alcoholic neurotic, selected forms #21, #16, #12, #20, #7, #22, #23, #24, #25 and #26 and arranged them into a design before beginning his Story; then he said, "It's a background to a park . . . myself and wife and little girl and two boys [#22, #23, #26, #24 and #25] are walking along through the park and see plants in special shapes [#21, #16, #12, #20, and #21], looks like a man [#16], like a fountain [#12], like a woman [#20], I can't describe, walk toward water, as you look out you see lighthouse [#7]."

Throughout his Story, the subject moved #7 about in a seemingly random manner, but he did not touch any of the other test forms used in his Story.

This case is, of course, quantitatively different from a case where many forms are moved about in random manner. The difference in Number of Test Forms Moved in different ways will become apparent when the manipulation variables are applied to each test form used.

*Example 7.* Where 1 form is rejected – pushed aside on Table 2.

K. K., a 35-year-old man, married, alcoholic neurotic, included all test forms but #10 in a scene arranged before he began his Story. He then said: "The World's Fair" and, pushing #10 aside, said: "this doesn't fit." Here, the action expressed was Manual Rejection.

### NUMBER OF INAPPROPRIATE BUILDING CONSTRUCTIONS

Some subjects attempt Building Constructions that ignore logical relationships of weight, size, form or all three factors. They attempt to balance a large structure on a smaller one, or a heavy one on a lighter one, or they attempt to balance an object on a surface that is too irregular to serve as a support. Such efforts are recorded as Inappropriate Building Constructions. Individuals who attempt Inappropriate Buildings may very likely be seeking nurture, acceptance and security through inappropriate and consequently ineffectual means.

*Example 1.* W. S., a 41-year-old man, married, neurotic, tried to balance form #21 on form #3. Then he tried form #21 on form #5. When he found it didn't work he said, "Let's pretend it does."

*Here we have 2 efforts at Inappropriate Building.*

*Example* 2. R. S., a 67-year-old woman, married, with psychotic depression, tried to balance form #8 on form #21, and when she found it didn't work, she said, "Well, I'll hold it there."

*Example* 3. M. B., a 36-year-old woman, married, paranoid schizophrenic, tried to balance form #22 on form #16. When it didn't work she said, "Well, I'll put it in front."

*Example 4.* G. R., a 22-year-old man, single, paranoid schizophrenic, tried to balance form #12 on form #6, and form #8 on form #13. When he found it didn't work, he said, "That's silly."

*Here we have 2 Inappropriate Building Constructions.*

*Example 5.* K. B., a 45-year-old man, single, alcoholic psychotic, placed forms #2, #5, and #6 on form #3. Although it held, it was top-heavy and in precarious balance, and is therefore classified as Inappropriate Building.

*Example 6.* R. C., a 53-year-old man, alcoholic psychotic, tried to balance form #21 on form #23, then tried form #17 on form #23. When they fell apart, he ignored them and went on to other forms.

*Here again are 2 Inappropriate Building efforts.*

*Example 7.* J. G., a 41-year-old man, married, alcoholic psychotic, placed form #1 on form #3 and form #21 on 1# thus:

21
1
3

This is an Inappropriate Building even though it managed to stay in balance – a very precarious balance.

### NUMBER OF INAPPROPRIATE DESIGNS

This refers to Design Constructions wherein the perspective of size and/or structure is distorted. A subject who offers a design without regard for size, structure and/or space relations, is likely to make inappropriate judgments about his relations to others.

*Example 1.* R. D., a 21-year-old man, single, paranoid schizophrenic, combined forms #1, #2, #3, #4, #8, and #9 into a Building then placed form #12 close to it and called it, "A mother and child standing near the White House."

Since form #12 was much larger than the building constructed, it should have been placed at a distance from the building for proper perspective. The design, as presented, disclosed *distorted perspective* and is therefore classified as Inappropriate Design.

*Example* 2. C. B., a 27-year-old man, single, paranoid schizophrenic, placed forms #14 and #17 near #16 and called #14, "ovaries," #17, "foetus," and said they both belonged in #16, the *male-female*."

#14 is far too large to be conceived as belonging in #16. Thus this is classified as Inappropriate Design reflecting poor perspective. The concept, male-female, is a contamination and will be discussed under the variable, *Test forms used to represent multiple concepts at one and the same time.*

*Example* 3. M. B., a 36-year-old woman, married, paranoid schizophrenic, arranged 28 forms into a seemingly arbitrary design, identified #10 as the "spare tire," and #12 as "she," then called entire design, a "car."

This design is obviously Inappropriate.

*Example* 4. M. B. (same as above), again arranged all 28 test froms into a seemingly arbitrary design and called it "a church or shul where Moses is meeting Christ." She then went on naming the different forms, giving free associations and clang expressions. This Design was also obviously arbitrary.

*Example* 5. I. K., a 22-year-old man, single, paranoid schizophrenic, placed form #11 near form #13 and identified his design as "a judge [#13] with big lips [#11]."

*Example* 6. S. K., a 52-year-old woman, married, paranoid schizophrenic, called form #3 a "store entrance" and #19 (which is far bigger than #13) was placed next to #13 and called "a boot in the store window."

*Example* 7. D. F., a 38-year-old woman, paranoid schizophrenic, constructed a house with forms #5 and #6 as one wall, #8 and #9 as another wall, #4 as front of house. In the space between these forms she placed forms #1 and #2 and called it, "the table." Then she moved #21 and #12 close to the building and said, "This man and wife are supposed to be in the house."

First of all, the table structure was far too large for the house structure, and the "man and wife" were both entirely out of proportion to the house. In this case, there are 2 *Inappropriate Designs.*

*Example 8.* H. B., a 41-year-old woman, married, anxiety neurotic, called a small portion of form #20, "my child," and placing #24 near it, called it "my child's feces."

In this case, form #24 was almost as large as the portion of #20 called, "child." This Inappropriate Design content suggests that H. B. has a distorted view of her child's behavior.

*Example 9.* T. L., a 36-year-old man, married, alcoholic psychotic, placed forms #22, #23, #24, #25, #26, #27, and #28 near form #12 and called these pieces "the arms, legs, and teeth of this woman."

The structural relationship between these test forms and and form #12 is obviously inappropriate.

*Example 10.* E. H., a 50-year-old man, married (normal sample), arranged forms #7, #4, #5, and #1 into a design called, "an exhibit of an ancient city." Then he identified #7, "pyramid," #4, "cornice of house," #5, "column of a building," and #1, "a matchbox."

Since #1 is much greater in size than any of the others, calling it a "*matchbox*" and placing it alongside the other forms reflects poor judgment. However, note should be taken of the comment made by this subject: "*I know it's too big* but I'll use it anyhow." This comment indicates awareness of the inappropriateness of the situation but inability to change it.

### NUMBER OF INAPPROPRIATE SORTINGS — (CONCEPTUAL CONSTRUCTIONS)

Concepts may be *classified* (sorted) inappropriately in terms of structure, function, size, weight, time, place, or other characteristics, or they may be inappropriately organized, that is, inappropriately related to each other through action words. Contaminated concepts are also inappropriate, but these are recorded under "*Test forms used to represent multiple concepts at one and the same time*," described in the section dealing with Unique Treatment of Test Forms.

*Example 1.* M. N., a 47-year-old woman, married, paranoid schizophrenic, *classified* test forms #1, #2, #3, #4, and #10 as books. Here forms #1, #2, and #3 could conceivably be the shape of books; even #4 could conceivably be a book form, but #10 could hardly represent a book form, in reality.

*Example* 2. M. N. (same as above), *classified* test forms #22, #23, #24, #25, #26, #27 and #28 as, "*tremendous weights* used for muscle development."

Here the inappropriateness is in terms of size and weight, since the forms so classified *are the smallest of all 28 forms in the test.*

*Example* 3. E. N., a 47-year-old woman, single, paranoid schizophrenic, classified forms #21, #12, #17 and #16 as, "ancient remains in a tomb," identifying form #21 as, "prehistoric man," #7, "monkey," #12, "an embalmed woman," and #16, "a woman in a bonnet and bustle."

Here the concepts are inappropriately related in historic time.

*Example 4.* C. B., a 27-year-old man, single, paranoid schizophrenic, called form #20, "an ancient altar with human remains on it and the tiny markings on it are *FB*, my mother's initials at the present time."

Here 2 concepts are absurdly related in historic time.

*Example 5.* G. R., a 22-year old man, single, paranoid schizophrenic, *classified* forms #21, #17 and #12 as, "*a family*" wherein #21 was "an elephant," #17, "a dog," and #12, "a woman."

Here the concepts are inappropriately classified in terms of structure or species.

*Example 6.* R. W., a 42-year-old woman, catatonic schizophrenic, gave a clear-cut example of inappropriate organization when she selected forms #7, #10, #14, and #1, then said, "I picked up the Egyptian sand dune [#7] near the water [#1]; I picked up the intestine [#10]; I picked up the stomach [#14] and ate lunch."

Here the concepts are *absurdly related* through action words and are also absurdly related in space.

*Example 7.* C. B. (same as in *Example 4*) called form #16, "a male-female," and #17, a "doubled-over male foetus that has not solved its problems." Here #16 is a contamination and is scored under 1 form equals 2 or more concepts. But form #17 is *inappropriately identified in terms of function.*

*Example 8.* M. B., a 36-year-old woman, married, anxiety neurotic, called form #18, "beginning of the first child," and form #17, "the first child." "Both are in the house with the mother [#12] and the father [#21]."

Here the concepts are absurdly related in time, since the "beginning of the first child" and "the first child" can't possibly exist at the same time as separate entities.

*Example* 9. R. W. (catatonic schizophrenic referred to in *Example* 6) called form #7, "Christ" and form #12, "Greta Garbo," and related the two in time. "Christ, the child, was taken away by Greta Garbo."

Here, the time relationship is absurd.

The following 3 examples were taken from records of the normal sample.

*Example 10*. E. H., a 50-year-old man, married, described form #11 as a "tongue brought up with other prehistoric remains by archeologists around Egypt."

Here the absurdity is in terms of time and structure. A "tongue" could not conceivably have remained in the earth intact for centuries.

*Example 11*. M. C., a 34-year-old man, married, called form #16, "Buddha," and form #18, "a prehistoric egg which belongs to the same period as Buddha."

*Time is absurd here also.*

*Example* 12. A. W., an 18-year-old girl, single, described a scene in the jungle where "the explorer tried to win over the natives by giving them furs and candy."

Here the idea of giving natives of the jungle furs appears to be quite absurd in terms of place.

It is noteworthy that in these 3 examples of Inappropriate Sortings or Conceptual Organizations, the inappropriateness appears to reflect inadequate knowledge rather than confused ideation.

### NUMBER OF INAPPROPRIATE ACTIONS

Number of Inappropriate Actions (i.e., dramatized actions) refer to actions that are not conceivable as occurring in reality. A conceivable action that is dramatized in opposition to the described action is also "absurd." When absurd actions are verbalized but not acted out, such verbalized actions are recorded as *Inappropriate Sortings (Conceptual Constructions)*, described above, rather than as *Inappropriate Actions*. Inappropriate Actions may reflect the subject's own inappropriate behavior, just as Inappropriate Building seems to reflect his inadequate and absurd strivings (feelings) for nurture and security. Inappropriate Design appears to reflect his poor judgment about his relations to others, and Inappropriate Sortings appear to reflect his absurd or bizarre ideation.

*Example 1.* C. M., a 21-year-old man, single, paranoid schizophrenic, called form #21, "a man" and form #16, "a tree." Then, moving form #21 forcibly against form #16, he said, "The man [#21] bumped into the tree [#16] and fell apart into tiny pieces." At this point form #21 was removed and forms #22, #23, #24, #25, #26, #27 and #28 were moved into the scene. The Inappropriate Action here is the dramatization of the man falling apart.

The same subject then moved test form #21 back into the scene and said, "This man, playing his violin, watches as his friend falls apart into little pieces."

In this example, the absurd Actions dramatized by the subject are – *the man falling apart by bumping into a tree,* and *The man playing a violin while watching his friend fall* *apart into tiny pieces.* These are scored as Action rather than as Conceptual Organizations( Sortings), because the subject moved the test forms to dramatize his ideas. In contrast is *Example 6* where the subject *described* absurd actions but did not follow through with movement of test forms.

*Example 2.* G. R., a 22-year-old man, single, paranoid schizophrenic, called form #10 a "cobra" and form #7, "my finger." Then, attempting to balance form #10 on form #7, he described his action, "The cobra is coiling itself around my finger."

*Example 3.* G. R. (same as above) called form #15 a "rock" and forms #22, #23, #24, #25, #26, #27 and #28, "small stones." He then rubbed form #15 over forms #22, #23, #24, #25, #26, #27 and #28 and described the action, "I'm trying to grind the little stones into a big rock. . . . I must be crazy . . . these little stones were ground into a big rock."

The actions dramatized in *Examples 2* and *3* are not conceivable in reality.

*Example 4.* M. B., a 36-year-old woman, married, paranoid schizophrenic, inverted form #21, describing the action as, "This man is hung."

The action described verbally was in opposition to the action dramatized.

*Example 5.* M. B. (same as above) moved form *#21 away from #12* and described the action as, "the man [#21] *walked up to her* [#12]." Here again the action verbalized is in opposition to the action dramatized.

When absurd actions are verbally described but not dramatized, these verbalized actions are recorded as Inappropriate Sortings (Conceptual Constructions) rather than as Inappropriate Actions. The following example demonstrates this difference.

*Example 6.* R. W., a 42-year-old woman, single, catatonic schizophrenic, placed forms #7, #10, and #14 near form #1 which she called, "water." Then she said, "I picked up the Egyptian sand dune near the water; I picked up the intestine; I picked up the stomach and had my lunch."

Here 4 absurd actions are *verbally* reported, i.e., picking up an Egyptian sand dune, an intestine, a stomach, and eating lunch. Since R. W. did not proceed to pick up the "objects" mentioned, these absurdities are scored as Inappropriate Sortings (Conceptual Constructions).

R. W.'s failure to act out her absurd ideation suggests that Inappropriate Conceptualizations reflect bizarre or absurd ideas and urges for absurd behavior which are inhibited from overt expression.

### NUMBER OF VERBALIZED AGENTS AND/OR OBJECTS NOT REPRESENTED BY TEST FORMS

Whenever a subject develops a story and neglects to provide a test form to represent a concept that is representable, either concretely or symbollically, by one or more of the test forms, the omission is recorded in this category. Occasionally, a subject will say, "I can't find anything here to represent . . ." (i.e. the concept given). In these cases, when the concept is representable by a form of the test and it is not recognized or is rejected as unsuitable by the subject, it should be counted as an omission. If the concept is not representable by a test form it should not be counted as an omission.

*Example 1.* K., a 52-year-old woman, paranoid schizophrenic, mentioned a sculptor and child in her second

Production but did not provide test forms to represent them. Since the sculptor and child are representable by forms of the test, these omissions are scored in this category.

*Example 2.* In Production IV, K. mentioned Bill and Mary but failed to represent them by test forms. These are scored as omissions.

*Example 3.* In Production I, K. made an effort to find a test form "to dress the girl in," and since there is no test form suitable for the concept of "dressing in," it is not scored as an omission.

*Example 4.* F., a 40-year-old woman, unmarried (normal sample), gave a story about an experience at the beach. She failed to provide test forms for the two girls who were having the experience at the beach. Here 2 omissions are scored.

In the examples presented above, it is quite apparent that the subject failed to represent verbalized concepts by test forms. However, there are times when the material is not as clear-cut, e.g., when the material is expounded in general terms, such as usually occurs in expositional material. In such cases, it is necessary for the examiner to carefully decide upon the representability of the concepts by test forms available and score accordingly.

*Example 1.* K. N., a 12-year-old boy (normal sample), expounded the following story around test form #12: "In the nuns' *cloisters*, a lot of nuns [#12]. And before the cloisters were formed, there were *many who went on hurting and whipping themselves*. Also it was a *man* who wanted an end of this and built *homes*, called cloisters and where they could gather. And they spread Christianity and there were lots of *priests*. They were a year on probation and if they wanted to stay their lifetime they were allowed to and they had to obey their *leader*. They wrote the *Bible* and many worked outside in the *fields* and when some persons were dying on farms, they wanted them to come and read from the Bible and for this they had to pay and so the cloisters became rich and when *people* came walking on the *roads* they could come and stay there and they did much good. But there were also other *cloisters* up there and so Luther came and so they got the Protestant Religion. They had many wrong religions, so they got this one."

Here we have an exposition about the development of Protestantism spread over a long period of time. There are many concepts that might very easily have been represented by test forms of the 3-DPT. The concepts that are underlined appear to be representable by 3-DPT test forms either singly or in combination. It will be noted that 13 concepts might have been represented by test forms either concretely or symbolically.

### USE OF FIRST PERSON IN THE PRODUCTION

This category is recorded when the subject actually refers to the self in the production. The subject may use pronouns or actual names, dates and/or places pertaining to the self. *Distinction should be made between those cases where the subject makes a complete identification by saying or implying, "this is me,* mine, our," and *where the subject prefaces his story with the remark,* "this reminds me of my, mine, our." First person reference patterns are identified as follows:

1. Test forms are treated as reality, i.e., "this is me, my, mine, you, that is *my* story."

2. Test forms stimulate recounting of personal experience, but the test forms are not otherwise involved in the memory.

3. Personal experience recalled and test forms used as personal symbols, i.e., "this *reminds* me of myself, my mother;

this could be our living room, my wife would serve drinks and these could represent the drinks," etc.

4. Test forms stimulate expression of personal preferences.

5. Test forms stimulate memory of story heard or read.

*Example 1.* M. F., a 22-year-old woman, married, catatonic schizophrenic, placed forms #10, #17, #14, #8, #9 and #18 on Table 2. Then she placed #18, #8 and #9 in a row. Form #10 was placed in front of these. #14 was placed in front of #10. #17 was placed in front of #14. Then she explained, "These are all animals. I'm afraid of them, don't know why they are animals to me and in order to get away from the animals I choose this to hide behind, the word that comes to me is mountain. I'd like someone to come and kill the snake." #18, #8 and #9 were identified as "animals," #10, as a "snake"; #14, as a "mountain"; and #17, as "this is *me*."

Here M. F. used the test forms as real objects in her life space—even to identifying form #17 as herself.

*Example 2.* M. F. (same as above), in her Postnaming Production, placed forms #17, #21, #1, #14, #16, #3, #8 and #9 on Table 2. Then, picking up #17, she said, "*I am going* to go with my husband [picked #21 and placed it alongside of #17] to Europe and *we* will go to the Louvre [picked #1 and placed it in front of #17 and #21]. Then after *we've* been to the Louvre, we'll go to Madrid, to the bull fights [picked #14 and placed it at a distance from #1, then moved #17 and #21 alongside of #14] and then *we'll* go to England and see the coronation [moved #17 and #21 over to #16], of the queen [#16] and then we'll go home [moved #17 and #21 over to #3, "home"] and we'll have two children [placed #8 and #9 near #17 and #21] and live happily ever after."

This Production was followed by a lengthy report of an opportunity she had had to go abroad before she was married with which her marriage had interfered.

Here again is a very direct use of first person, with the test forms treated as reality.

*Example 3.* H. E., a 37-year-old man, married (normal sample), placed forms #12, #16, #1, #2, #5, and #10 on Table 2, arranged them into a Design and Building Constructions, and described the whole as, "*this reminds me of my livingroom* where we have Chinese decorations. We are having company so we are drinking and eating, [#5] represents drinks, [#10] represents pretzels, [#4] sandwiches, and [#8] fish balls."

Here the subject is aware the test forms are symbols distinct from reality.

### BACKGROUND SETTINGS FOR EVENTS IN PRODUCTIONS

Backgrounds in the 3-DPT are very diversified in view of the nature of the test which permits the subject to create whatever background setting he wishes. However, in spite of the diversity, the settings given by 100 subjects were classifiable under the following headings:

1. *Home, whole or part; inside or outside; implicit or explicit.* This refers to home of any period, whether contemporary, medieval, ancient, rich or poor, mansion or clay hut.

2. *Public Place,* whole or part, implicit or explicit. In general, Public Place is scored when the setting implies that people are free to gather there. Scored here are such places as city, community, theater, zoo, museum, beach in summer, park, public lawns, doctor's office, dentist's office, classroom, lecture, etc.

3. *Isolate Places* such as natural isolation found in mountains, desert, island, field, woods, jungles, wharf, dock, beach

if described as deserted (170, p. 137). This category reflects avoidance of people but does not imply decay, deterioration and/or death.

4. *Religious settings* such as church, temple, shrine, etc.

5. *Water* which includes specific references to a body of water, or a lonely boat on the water, or a beach wharf or dock. Wharf or dock are scored as Isolate Places as well as Water. Beach is scored Water and Isolate where it is described as such; otherwise it is scored Water and Public Place.

6. *Desolate places* such as graveyard, grave stone, ruins, excavations, and others that imply death and decay. Such settings reflect depression and despair (170, p. 134).

7. *Geography* specifically named such as New York, London, South America, etc.

8. *Vague,* unclear unspecified settings.

9. *Mythological settings* such as fairyland, wonderland, the House of the Gods, etc.

10. *Futuristic space conceptions* such as Mars, trip to the moon, etc.

If the subject provides two or more Backgrounds for his events, each Background should be recorded.

*Example 1.* T. R., a 52-year-old man, married (normal sample), developed a Story about a cave man building his home and equipment.

This is classified as *home.*

*Example 2.* T. R. (same as above), in his Postnaming Production, described a scene wherein a nun was reading the story of Adam and Eve to children sitting at a shrine.

Here the Background is a church, so is recorded under religious settings.

*Example 3.* A. L., a 51-year-old man, married (normal sample), gave a story about a girl who joined the church because of a disappointment in love.

This is classified as a religious setting.

In this same Production "an old gentleman was going through the forest when misfortune befell him." This is classified as an isolate place (woods).

*Example 4.* E. H., a 50-year-old man, married (normal sample), developed a Story about an archeologist *digging in the ruins in Egypt.*

This is classified as *geography* and *desolate place* (*ruins*).

*Example 5.* M. M., a 37-year-old man, married, alcoholic neurotic, gave a story of a man exercising on "a lawn on which were standing many statues."

This is classified as a public place since "a lawn" as well as the description, "on which were standing many statues," imply public places.

In his Postnaming Production he told of a man in a dentist's office having his teeth filled. This is again a place where the *public goes,* so is scored under public places.

*Example 6.* H. B., a 55-year-old man, married, alcoholic neurotic, told of the events at the World's Fair.

This is scored, *public place.*

In his Postnaming Production, he told of a man going shopping, visiting several stores as well as the dentist's office. Here again are *public places.*

*Example* 7. M. L., a 42-year-old man, married, alcoholic neurotic, told of a guitar player who was walking along the road and came to a shrine.

Here road is a *public place* and the shrine, a *religious place.*

In his Postnaming Production, this same subject told about a man playing his guitar on the *dock* while waiting for a boat to arrive. Here the dock appears to be isolated – no other people are indicated or implied – so it would be scored both as *water* and *isolation.*

*Example* 8. K. K., a 35-year-old man, married, alcoholic neurotic, placed the events of his stories at the World's Fair.

This is obviously a *public place.*

*Example* 9. T. C., a 52-year-old man, married, alcoholic neurotic, told of ancient days when a man and wife were building a home, while the neighbors were nearby indulging in pagan worship.

Here *home* and *religion* are scored.

In his Postnaming Production, he described the World's Fair which is a *public place.*

*Example 10.* R. C., a 53-year-old man, married, alcoholic psychotic, told about a graveyard in his Prenaming Production.

This is classified under *desolate places* (*graveyard*).

In his Postnaming Production, he told about a man going to sea. This is scored as *water.*

*Example 11.* E. S., a 31-year-old woman, married, anxiety neurotic, gave a story of family life at home.

This is scored as *home.*

This same patient in her Postnaming Production repeated the family theme in the home and added a visit to a grave by the sea. Here *home, desolate place* (grave), and *water* (by the sea) are scored.

### FIXED IDEAS

Fixed ideas are manifested in the 3-DPT by a variety of performance patterns. The different patterns of performance appear to reflect different degrees of fixation or rigidity of thought. Fixed ideas are classified under the following performance patterns:

1. The same theme is offered in two or more Stories.

2. The theme given in one Story is developed further in a second Story.

3. The subject gives a Prenaming Story, but cannot give a Postnaming Story.

4. The subject gives a Postnaming Story but is unable to give a Prenaming Story.

5. No response is obtained to requests for stories.

6. In the Naming Test, the subject emphatically repeats identification of forms he gave in a story. The subject either explicitly states or implies by his tone, "I already told you, this is such and such." Usually the subject uses the definite article *the* or the *possessive case* in making identifications.

Some subjects manifest fixed ideation in several of the listed ways, by repetition of themes in two or more stories as well as by emphatic identifications in Naming Test. All signs of fixed ideation should be recorded since the number as well as the type of sign may reflect degree of fixation.

*Example 1. Same theme offered to Prenaming and Postnaming requests and the definite article used in Naming Test.*

R. D., a 21-year-old man, single, paranoid schizophrenic, presented the following Production each time: Forms #1, #2, #4, #8, #9 were combined into a structure and called, "the White House"; then form #12 was placed near this structure and described as "woman holding a child near the White House in Washington, D.C." In the Naming Test, he again identified #12 as *the* woman holding *the* child.

*Example 2. Theme given in Prenaming Story is developed further in the Postnaming Story.*

D. L. a 33-year-old woman, single, catatonic schizophrenic. In Prenaming Production, she developed an elaborate "garden scene where husband and wife entertain friends." In Postnaming Production, she developed an elaborate scene in the *living room* of this same family. Here the children are playing with their toys, the pet dog is resting, the mother is watching the children at play.

After testing, this patient gave the following enlightening explanation of her productions: "These stories are just ordinary living. The way people would like to live, should live. It's the way people live whom I visit, nothing unusual, though nice. *With me, marriage is a must – I realize you must be lucky.*" (This last sentence no doubt referred to the married status of the examiner.)

*Example 3. The subject gives a Prenaming Story but cannot give a Postnaming Story.*

L. F., a 49-year-old woman, married, anxiety neurotic, in Prenaming Production identified forms #21, #16, #12 and #17 as *"members of my family burdened and bound in chains."* For the Postnaming Production, she said, "That's the only story, I can't change it."

*Example 4. The subject gave a Postnaming Story but claimed inability to give a Prenaming Story.*

M. G., a 45-year-old woman, married (normal sample), in response to the Prenaming directions, selected forms #1, #2, #3 and #21, combined #1, #2, and #3 into a building structure, called it a "castle in the air" and then said, *"I can't give a story."* However, in the Postnaming Production, she developed a Story about a trip to the zoo.

*Example 5. The subject protested giving a Story to Prenaming directions but gave an elaborate Story in Postnaming Production.*

M. C., a 34-year-old man, married (normal sample), protested giving a story in Prenaming task, but selected forms #10, #1, #2, #3 and identified them as insulation material.

In the Postnaming Production, he developed an elaborate scene with ethical and moral implications.

*Example 6. Same theme is offered in one Story and in Testing of Limits.*

R. C., a 53-year-old man, married, alcoholic psychotic, identified form #21 and form #20 in his Postnaming Production as, "man with a beard" and "lady hiding herself," and repeated these identifications in Testing of Limits I.

*Example 7. No response is given to either Pre- or Postnaming requests for stories, but a response is given to Testing of Limits I.*

E. H., a 17-year-old boy, catatonic schizophrenic, could not respond to the requests for stories but in Testing of Limits *he wrote* on a paper, "The little figure is Walter [little brother] and the . . . [then he whispered, pointing to #12] a woman, mother, and [#21] a man, my father."

*Example 8. In Naming Test, a form is emphatically identified as the concept used in the Prenaming Story.*

S. F., a 38-year-old woman, married (normal sample), used forms #21, #12 and #13 in her Prenaming Production and identified them respectively as "cave man," "madonna," and "foot rest." In the Naming Test she said for #21, "Why, this is *my* cave man," for #12, "This is *my* madonna," and for #13, "This is *my* foot rest, like the shoe last in my father's store."

Here the use of the possessive case in the Naming Test represents fixed ideation.

*Example 9.* The subject repeats the *same theme in Prenaming Story, Postnaming Story, and in Testing of Limits I.*

An 11-year-old boy presented two Productions centered about the enslavement of a wife (#12) by a husband (#21) and in Testing of Limits repeated this theme.

*Example 10. The Same theme is given in two Stories and forms are emphatically identified in the Naming Test.*

J. B., a 49-year-old man, single, alcoholic psychotic, gave the same theme in the Pre- and Postnaming Productions and in the Naming Test, emphatically identified the forms used in the productions as though there were no other possible interpretation of these forms: "that's *the* woman [#12], *the* wrestler [#21], *the* bone fragments [#22, #28]."

### ARBITRARY VERBALIZATION

Arbitrary Verbalizations are ideas that do not fit logically into the theme, and should not be confused with Isolate Ideas which are responses that refer to test forms. Arbitrary

Ideas have no apparent point of reference, and are thus more malignant than Isolate Ideas.

*Example 1.* Mrs. K., a 52-year-old woman, paranoid schizophrenic, told a story about going to a dance and having a wonderful time, then she stated: "This is a telephone conversation – it's just an episode." These remarks did not fit the theme so are recorded as Arbitrary Verbalizations.

*Example 2.* R. W., a 42-year-old woman, catatonic schizophrenic (described previously), made the remark: "Toby said the child was taken by Greta Garbo." This remark did not pertain to the test forms nor did it fit the story, so is scored, Arbitrary.

*Example 3.* M. B., a 36-year-old woman, paranoid schizophrenic, gave an elaborate production using all 28 test forms. She then said, "I'm in room 21 and I voted for IKE and 2 and 8 are 10." Then she began a confused story about the similarity between religions and suddenly introduced the arbitrary remark, "I have plenty of shoes in Baltimore" – also – "My father is resting in peace; the U.N. is for peace; some day we'll all rest in peace."

The arbitrariness of many of the statements here is obvious.

### UNIQUE TREATMENT OF TEST FORMS

The particular manner in which each test form is treated may disclose the type and degree of stimulus value present in each test form. These treatment variables may also provide additional indices to pathology.

### 1. *First Test Form Reacted To by Subject*

This refers to the test form that first calls forth an observable response from the subject whether manual, visual, or verbal, and whether the response is given before or after directions are finished.

### 2. *Test Forms Used in Design*

Test forms are scored in Design, whether the Design expresses abstract or concrete relationship. Test forms are counted whether the Design they were used in was kept intact, changed or destroyed.

### 3. *Test Forms Used to Represent Multiple Concepts at One and the Same Time*

This variable is similar to the contaminated response in the Rorschach.

*Example 1.* I. K., 20 years old, male, paranoid schizophrenic, called #14; "a human face" and "a clam," then went on and called it: "a clam with human intelligence."

*Example 2.* R. W., a 42-year-old woman, catatonic schizophrenic, called form #12: "Mary" and "Greta Garbo," interchangeably in the same Story.

*Example 3.* C. B., a 29-year-old man, paranoid schizophrenic, described form #16 as: "a male Greek face with a female somehow above it so that it is a male female."

*Example 4.* C. H., a 36-year-old woman, paranoid schizophrenic, called form #16: "the drummer and dancer" at one and the same time.

### 4. *Test Forms Manipulated in an Isolate Manner*

Test forms that are manipulated – either singly or in Constructions – and are offered in the Production but are unrelated to each other or to the theme being developed, are called *Isolate Manipulations.* These test forms may be verbally identified or not. The test form may have been selected and placed on Table 2 and then ignored, or it may have been added and identified but not incorporated into the theme. Sometimes two or three test forms are combined into a Building or a Design which is then ignored, or if identified is not related to the theme. In all these cases, the subject seems to be unaware of his omission.

In cases where the Production is offered without any verbalizations, whether the test forms are left singly on Table 2 or are combined into a structure, these offerings are scored as *Isolate Manipulations,* i.e., each test form used in the structure is scored as an Isolate Manipulation. If the subject gives special treatment to a test form(s) on Table 1, e.g., keeps touching it throughout performance, holds his hand over it, lays it in horizontal position, inverts it, combines it into a Structure on Table 1, count these as *Isolate Manipulations unless the subject distinctly states that these are not important,* they "don't count," "they don't fit." If the subject repeatedly selects and then rejects a test form, count it as an *Isolate Manipulation* since his repeated selection of it indicates he cannot give up the idea. The repetition may occur in one Production or it may occur in two separate Productions.

*Example 1.* M. H., alcoholic hysteric, selected form #20 in the first Production, rejected it, selected #20 in the Post-naming Production, and then rejected it again.

*Example 2.* R. S., a 67-year-old woman, psychotic depressive, selected test forms #16, #9, #12, #1 but failed to incorporate them into a theme.

All four forms are scored, *Isolate Manipulations.*

*Example 3.* Mrs. K., referred to previously, introduced form #22 into a Production without incorporating it in the theme.

This test form is scored as an *Isolate Manipulation.*

In her second Production, she introduced form #2, but gave no explanation about it. This is also an *Isolate Manipulation.*

*Example 4.* An 11-year-old boy placed forms #10, #21 and #9 on Table 2 but gave no verbalizations.

These three forms are classified as *Isolate Manipulations.*

*Example 5.* A 14-year-old boy (normal sample), selected test forms #1, #2, #3, #14, #10, combined #1, #2 and #3 into a Structure, but gave no verbalizations.

In this case, each test form used is scored as *Isolate Manipulation.*

*Example 6.* A 32-year-old alcoholic man excessively manipulated form #22, which he had left on Table 1. He "walked" it, inverted it, held his hand over it, picked it up, put it down, compared it to test form #23, as he developed a theme about the forms he had placed on Table 2.

Here, his manipulations of #22 are scored as *Isolate Manipulation.*

*Example 7.* G. B., a 49-year-old man, psychotic alcoholic, selected test forms #21, #12, #4, #1, #14, #22, #23, #25 through #28, built a theme around #12 and #21, identified all the others, but in no way connected them to the theme. However, he classified #1 and #4 as: "Mason's symbols," #22 through #28 as: "bones," but couldn't name #14.

Here test forms #4, #1, #14, #22, #23, #25, #26, #27 and #28 are all scored as *Isolate Manipulations.*

### 5. *Multiple Test Forms are Used to Represent One Concept at One and the Same Time, the Combination Seemingly Arbitrary*

Sometimes a subject selects two test forms identifying them as the same concept when the test forms obviously are different in outline and/or other dimensions. When the test forms represent the same concept at different times and under different circumstances, then it is not scored in this category, since the changed circumstances might reasonably change the concept. Other subjects combine two or more test forms in an arbitrary manner and assign an arbitrary name to the group of test forms. This type of arbitrary relationship of two or more test forms is scored in this category.

*Example 1.* Miss K., 26 years old, catatonic schizophrenic, selected test forms #26 and #27 and called them: "the child."

*Example 2.* Mr. R., 22 years old, paranoid schizophrenic, selected forms #13 and #17 and, placing them in front of him, called them: "the dog."

*Example 3.* T. L., a 36-year-old alcoholic psychotic, selected forms #12, #22, #23, #24, #25, #26, #27, #28, put them into a group, and called them a "statue of China, India, Egypt."

*Example 4.* R. S., a 52-year-old married man with psychotic depression, called form #19 a "military shoe" and form #13 the "identical shoe, same thing."

### 6. *One or More Test Forms are Used to Represent Opposite Characteristics of One Concept*

The opposite characteristics of one concept may refer to front and back of one form, or top and bottom of one form, or in this position or that position, or to several forms combined into a Structure and identified as the concept with opposing traits.

*Example 1.* Mr. G., 30 years old, anxiety neurotic, selected forms #12 and #16 and, placing them back to back, called them: "a cruel woman." "The back [#16] is her cruel side and the front [#12] is her kind side."

*Example 2.* Same patient selected forms #21 and #17 and, placing them back to back, called #21: "the strong side of the man" and #17: "the weak side of the man."

*Example* 3. H. B., a 41-year-old married woman, anxiety neurotic, called forms #12 and #21: "opposite feelings," form #12: "soft," and form #21: "harsh." "Both represent my own conflicting feelings."

*Example 4.* R. H., a 40-year-old man, anxiety neurotic, called form #21: "good angel," form #10: "evil," form #16: "both good and evil, two sides of nature, could also be octopus which is cruel, on the front side, and the back side could be kind, a consoling old man with a beard."

### 7. *Test Forms are Indecisively Identified*

The words *either-or* must be *explicit.*

*Example 1.* G. W., 37-year-old married woman, alcoholic neurotic, called form #17: "father, husband or brother." Form #12 was called: "his daughter or wife or sister."

*Example* 2. L. T., a 35-year-old woman, married, anxiety neurotic, called form #21: "man, husband or father or what-have-you."

*Example* 3. H. B., referred to above, called form #12: "mother or nun."

### 8. *Test Forms Used in Building*

These test forms are recorded whether the Building Structure is left standing or not, whether it is identified or not, and whether it represents abstract or concrete ideas and relationships.

### 9. *Isolate Ideas*

*Test forms that are selected by a subject during a Production, and identified verbally but are not incorporated into the theme* of the Story are scored *Isolate Ideas.* These Isolate Ideas may have been introduced during the development of a Story or may have been added after the Story is finished.

Of course, when test forms are simply named and these namings are offered as the response to the request for a Story, each test form thus treated is scored as an Isolate Idea. Scored also as Isolate Ideas are test forms that are not moved to Table 2, but are nonetheless identified by the subject during the development of his Story, yet are not incorporated into the theme.

*Example 1.* R. W., a 42-year-old woman, catatonic schizophrenic, selected 15 test forms, combined 10 into a confused theme, and then named the other 5 test forms as follows: #13, "a toilet," #15, a "bowel," #8 and #9, "a penis," #1, "soap."

*Example 2.* R. S., a 67-year-old woman, with reactive depression, selected test forms #8, #9, #12, #21 and #16. She held #18 on top of #21 and said, "This is Atlas holding the world on his shoulders." Then, pointing to #16, she called it: "a church symbol." The remaining test forms were ignored.

In this example, #16 identified as a church symbol is called an *Isolate Idea.* The unidentified forms cannot be scored here but are scored under the heading, Isolate Manipulations.

*Example 3.* The productions of Mrs. K., described previously, contain examples of ideas unincorporated into the theme, as well as explanatory remarks that are quite arbitrary. In Production I, Mrs. K. introduced test form #22 as "anatomy," as she developed her Story of Bill and Mary at a party. This idea has no apparent connection to the party. Test form #22 is scored therefore as an Isolate Idea.

### 10. *Test Forms Moved During the Development of the Story*

The various ways in which forms are moved about during the Story telling are described under the variable, *Number of Test Forms Moved.*

### 11. *Test Forms Used in Sortings*
(Conceptual classifications)

Each test form used in a sorting category is scored here. This variable should be distinguished from the variable, *Number of Sortings,* which was described earlier (p. 45).

### 12. *Test Forms Rejected During Development of the Story*

Rejection of a test form must be explicit, i.e. the subject must say he rejects the form or he must remove the test form from the area on the table where he is developing his Story.

## CONTENT VARIABLES

Content Variables are significant in the Stories as well as in the Naming Task of the 3-DPT. Attention has already been given to the background and time contents (pp. 63, 33). Here reference is made to the specific content attributed to each test form selected and used by the subject in the Productions of the 3-DPT.

Content given in the 3-DPT lends itself to the following classifications:

1. *Bone* – including dog's bone used as food. In such case, Food category is scored also.

2. *Human and Parts* – includes mythological humans such as elves, giants, trolls, and inanimate representations, such as statues, dolls, puppets. Parts refer to human faces, arms, legs – also wooden legs, false teeth, etc.

3. *Animal and Parts* – includes mythological animals such as unicorns, extinct animals such as dinosaurs, also fish and inanimate representations such as teddy bears, mickey mouse, etc.) Animal heads, limbs, tails, fins, scales, etc., are recorded here also.

4. *Nature* – includes vegetation such as trees and flowers; minerals such as rocks and metals; earth, water, fire, stars, planets; but not agricultural products such as kernel of wheat, corn or potato which are scored under Food.

5. *Food* – includes meats, vegetables, fruits, candy; also related oral objects such as medicine, chewing gum and some non-ingested oral objects such as cigarettes, pipes, etc.

6. *Excreta* – anal and oral.

7. *Inanimate – Man-Made,* mechanical, architectural, recreational; other man-made objects such as stones for steps, logs, snowforts. This also includes all natural materials manipulated by man such as moulded clay, gravel for roads, etc.

8. *Vague* – includes those contents where no identifiable characteristic is indicated such as in thing, something, junk, etc.

9. *Incomprehensible Responses* – such as neologisms.

10. *Ambiguous Responses* – such as creature, head, leg, mermaid.

11. *Abstractions* – such as geometric forms like cubes, cylinders, triangle, square; also peace, the work, hate, confusion; also pyramid, prism unless these and the ones above are identified as real structures, e.g., pyramid in Egypt, cube of ice, square box, three-cornered triangle, sandwich.

Variables that define content are scored in the following categories:

1. *Movement* – where the form is actually seen in motion such as walking, running, hopping, climbing, falling, bending, lifting, crouching, etc. In these cases, the person, animal or thing is seen as changing its position relative to its surroundings or it is seen as carrying on activity within itself so that there is tension in the muscle system. *In other words, if the motion would tire the individual if continued indefinitely, it is scored in this category.*

2. *Latent Movement* – where the form is seen in a quiescent position arrived at from some activity and that could easily lead back to activity. In Latent Movement the muscles are at rest, no tension is experienced and continuation of the activity will not lead to fatigue of the system. Examples of latent movement include: person or animal curled up, sleeping, resting, lying down, sitting, leaning, hanging limply.

3. *Artificial Representation* – such as wooden leg, false teeth, glass eye, statues.

4. *Mythical Representation* – will distinguish those responses referring to reality concepts from those referring to fantasy concepts.

5. *Representation Is Seen as Distorted in Some Way* – e.g., "it is a man, but such crude form."

6. *Emphasis of Detail Within General Response* – such as, "this [#17] is a monkey; he has his arm up over his face. I see his arm so clearly."

7. *Test Form Is Used as an Agent* – i.e., the concept is seen as *doing the action.*

8. *Test Form Is Used as an Object* – i.e., the concept is seen as *receiving the action.*

9. *Religious Representation* – such as Adam and Eve, Jesus, Mary, Moses, church, altar, shrine, monastery, etc.

10. *Test Form Represents Good Qualities* – such as kindness, beauty, wisdom, etc.

11. *Test Form Represents Evil Qualities* – such as harsh, cruel, cold, dangerous, etc.

### GENERAL BEHAVIOR VARIABLES

General behavior of the subjects during testing provides a group of variables defined as follows:

1. The subject rejects his story and gives another.

2. The subject criticizes his story but does not reject it.

3. The subject asks reassurance of the examiner such as, "Is this what you want?" "Am I doing it right?" "Should I tell about each piece that I pick?" "Do you want a true story or make-believe?" "Do you want what comes to my mind or should I make it logical?"

4. Subject's Story content implies effort expended but nothing accomplished, such as, "trying to," "wanting to," "hoping to," "wishing," "waiting for something to happen."

5. Subject protests, "I can't give a story," "don't know a story," "have no imagination."

6. Subject needed one repetition of directions to overcome protests.

7. Subject needed more than one repetition of directions to overcome resistance.

8. Subject expressed friendliness through remarks, looks or actions.

9. Subject expressed hostility through remarks, looks or actions.

10. Subject stated, "Must plan before acting" or other remark reflecting careful, cautious deliberation.

### FEELING TONES

Feeling Tones are often projected onto the test forms used in the Story. They are not to be confused with qualities that define content such as goodness, kindness, evil. These qualities, when given, are seen as symbolically represented by the test forms. They are intellectual, moral, aesthetic or ethical concepts. In contrast, Feeling Tones are dynamic descriptions of agents or objects whether represented by test forms or not. Feeling Tones are classified as follows:

1. Happy, cheerful, contented.
2. Ashamed (apologizes, atones, reforms, blames self).
3. Afraid, seclusive.
4. Striving for achievement, aspiring.
5. Restless, nervous, fidgety.
6. Sad, depressed, hopeless, tired, lonely, despairing.
7. Mad, angry, hating, threatening, fighting, verbally or physically critical.
8. Confused, perplexed, uncertain, crazy, drunk, disturbed.
9. Indifferent, aloof.

10. Self-centered.
11. Protective, assumes responsibilities for others' welfare.
12. Ambivalent, inner conflict.

*Example 1.* W. B., a 47-year-old man, alcoholic neurotic. In an elaborate drama, he identified test form #12 as mother, #17 as daughter; "both are *very sad* as they watch the burial."

*Example 2.* R. L., a 37-year-old alcoholic man, psychotic, identified #17 as a "monkey in misery."

### VARIABLES IN TESTING OF LIMITS

Testing of Limits, as described earlier (p. 6) involves three test forms, namely, #21, #12, and #17. These test forms are presented by the examiner to the subject who is then asked to make up a Story using these three test forms in the Story.

In Testing of Limits as in the Productions, verbalizations and manipulations are analyzed for variables. Content here as in the Productions may be classified under the following headings: human, animal, man-made objects, natural objects, abstractions, mythical, religious or not identified. The test forms may be classified as agent or object, seen in motion or static, and may be scored as Isolates or seen in relation to the other test forms.

Feeling Tones projected onto the test forms used in Testing of Limits, are classifiable in the same categories as are Feeling Tones in Productions, thus: happy, shame, fear, sad, restless, angry, indifferent, strong, confused, self-preoccupied, protective, crazy.

The manipulations of test forms in Testing of Limits as in the Productions offer unique opportunity for insight into deep layers of the personality, disclosing dynamics that the subject can't endure and is unable to verbalize.

The test forms presented in the Testing of Limits are symbolic of humans, i.e., #21 is seen as a man, #12 as a woman, and #17 as a child. It therefore seems reasonable to assume that the manner in which the subject treats these three test forms provides insight into the subject's self-concept and self-acceptance, his concepts of and attitudes toward the parent figures, and the manner in which the subject relates to the parent figures as well as the manner in which the parents relate to each other (as seen by the subject).

Thus if a subject fails to identify these three test forms as humans or animals, it is likely that the subject has deep-seated difficulties in relation to his parents, other humans and the self. When a subject treats each test form as an isolate, does not verbalize a relationship, there is also evidence of difficulties in interpersonal relations: He apparently can accept the reality of others but does not dare to relate to them. When a subject expresses a relationship between two of these test forms but ignores the third test form or denies its relationship to the *others,* he indicates that the particular test form treated in isolation rouses feelings that are unbearable to him.

Attitudes towards the self and others may be expressed through manipulation of test forms *in addition to* or *instead of verbalizations.* Some very withdrawn subjects may not be able to verbalize a story but they may move the test forms out of the position assigned them by the examiner. These movements are substitutes for words and reflect ideas and feelings the subject is unable to bring to verbal expression. The manipulations of the test forms may disclose acceptance, rejection, negation, withdrawal, conflict or other urges and affects. Thus the three test forms may be moved apart; two may be left close together; all three may be turned with backs to each other; or one may be turned away. The test forms may be moved closer together – even touching each other in a seemingly friendly manner – or they may be moved toward each other in a hostile manner. These different ways of relating the test forms physically appear to reflect the subject's direction of feelings. These manipulations, recorded in detail, provide rich insights into the functions of the personality.

Usually subjects give verbal indications of relationships as they manipulate the test forms to reinforce the meaning expressed. In many cases, the verbally expressed relationships correspond to the relationships implied by the manipulations of test forms. In some cases, the manipulations of the test forms are noncommittal, neither supporting nor negating the verbalized relationships. In still other cases, the verbally expressed relationships are contradicted by the manipulation of test forms. These contradictions between verbally expressed relationships and relationships expressed through physical manipulation of test forms may reflect respectively acknowledged and repressed, acceptable and unacceptable, conflicting or confused feelings, attitudes and/or urges.

The significance of the manipulations of the test forms in Testing of Limits is enhanced by the fact that the test forms are selected by the examiner and presented intentionally in a Design reflecting positive accepting interpersonal relations, i.e., the three test forms are presented in face-to-face positions. Thus any movement of test forms out of the original Design is significant. For example, when a subject moves a test form away from the other two test forms, increasing the distance but still facing the other two test forms, withdrawal is implied by the increased distance, but desire to relate to the other two is implied by the fact that the test forms still face each other. When a test form is turned around so that its back is turned to the center point, withdrawal and rejection are implied. Where test forms are moved closer together so that they touch each other, the implied feelings are dependency and protection. On the other hand, the test forms may be moved together in an assaultive manner reflecting overt hostility.

A few examples of Testing of Limits will serve to illustrate how to score the variables.

*Example 1.* I. M., a 50-year-old man, single, obsessive compulsive, identified test forms #12, a "nun," #21, "a man, #17, "the wife of the man." He then explained: "The man *passed* the nun and *went up the hill* to *his wife* who is waiting for *him.*"

I. M. did not touch the test forms as he gave his Story, implying accepting feelings between the self and the parents. Failure to touch test forms is recorded.

The content here would be scored *Natural Object* (hill), a concept not represented by a test form, and Human for all three test forms; #12 would also be scored Religious. All three test forms would be scored as being included in the theme. Test form #21 would be credited with *Active Motion,* while test forms #12 and #17 would be credited with *Latent Motion.* Test form #21 would be scored as *Agent* and #12 and #17 as *Objects.* No Feeling Tones were verbally expressed, so none are scored.

*Example 2.* L. L., a 30-year-old woman, married, paranoid schizophrenic, identified test form #21, "a man," #12, "a woman," #17, "a child." She then went on as follows:

"It's hard to make those into a story, they are not related. As I look at them, the conflict lies between the fact that *mother* looks *so gentle* – still the *man is so beaten down* and *burdened down, lumbering along* and the *child* is *separated* from both of them so they have *no relationship* and I can't pull it into a story. Child is off hiding – protecting her head – guess she's *afraid* of the *man's defeat – he's defeated* by *gentility* of the mother – next thing upsetting me was looking at place in her arms – is that what upsets him – could be – *no baby there* – which is why the child is over here because she's afraid of them – maybe she got lost in the *confusion between* man and woman – the baby is a girl – she's gone from mother's arms because of confusion between man and wife – woman has false gentility – if she hadn't been so concerned with effect of holding baby in her arms, baby wouldn't have been so beat up under gentility . . . – It's hard to say."

The subject *moved test form #17 round and round,* apparently dramatizing the confusion felt by the "little girl."

Here content is classified as *Human* for all three test forms and one additional *Human* is scored for verbalization, "*baby.*" Test form #17 is scored for *Latent Movement* (hiding) while *Active Movement* is assigned to #21. No action is scored for #12. Test form #17 is scored for three types of manipulations, to describe the manner in which this test form was treated: (1) it was *turned with back toward the other two,* (2), *it was turned toward the others,* and (3), it *was continuously manipulated.*

Verbal denial of relationship between test forms is scored as well as the fact that the test forms are related in theme. *These are, of course, contradictory variables* and serve to reinforce this patient's conflict and confused feelings about herself and parents.

Feeling Tones in this Testing of Limits were profuse and clearly expressed. Thus, test form #21 is credited with fatigue, depression and confusion; #12 is credited with indifference, self-preoccupation and confusion; and #17 is credited with fear and confusion.

*Example 3.* M. F., a 36-year-old woman, married, paranoid schizophrenic, identified test form #21, "a man," #17, "a woman who changes into a frog," and #12, "the future." She then went on as follows:

"Same story made up before. Man working hard and woman sad and both working towards future. This could be working hard in thoughts and materially, both working together toward future he [#21] could be playing a serenade to the future and she [#17] becomes a frog on a stool. In this scene, he serenades in his own little way – just croaks along – this symbolizes the people that have no music but still want to voice self towards future."

Test forms were not touched by the subject. Content here is scored as *Humans* for test forms #21 and #17 also Animal for #17 and Abstraction for #12. Test forms #21 and #17 are also credited with Active Motion and both are scored as Agents while #12 is scored as Object. All three test forms are credited with being related to each other in the theme.

Feeling Tones were explicitly expressed for test form #17, which is credited with "sadness." A feeling of striving toward achievement was implied in "working hard toward the future . . . people that have no music but still want to voice self toward future." This Feeling Tone is credited to test forms #21 and #17.

*Example 4.* H. G., a 55-year-old widow with psychotic depression, identified test form #21, "Old Black Joe," #12, "myself wrapped up in my sadness," and #17, "a young man in my childhood." She then elaborated: "They played *Old Black Joe* so much this reminds me of Old Black Joe [#21]. This reminds me of my visits to the museum as a child, a young male [#17]. This is myself all wrapped up in my sadness [#12].

No verbal or manipulative indications were given of the relationships between the test forms, so each test form is scored as an Isolate Idea and untouched.

Here content is scored as Human for all three test forms. Several subjects were introduced verbally but were not represented by test forms. A Feeling Tone of sadness was explicitly attributed to test form #12.

*Example* 5. R. B., a 33-year-old man, divorced, alcoholic psychotic depressive, identified test form #21, "a man," #17, "a dog," and #12, "an Arab man." He then said: "I can't connect them," but he proceeded to move test form #17 away and with its back toward the other 2 test forms. He then moved the other test forms, #21 and #12, further apart but still facing each other.

Here content is scored Human for #21 and #12 and Animal for #17. Further scoring includes: Isolate Ideas and verbal denial of a relationship for all three test forms. Test form #17 is credited with being moved away and with back turned to others, while test forms #21 and #12 are scored as moved apart. No Feeling Tones were verbalized.

The significance of the manipulations here was dramatically clarified in Testing of Limits II when the examiner said: "Now this test form [#21] is a man and this one [#12] is a woman and this one [#17] is a child; will you please tell me a story about them?" The subject responded readily: "I'd say this man was drunk and his wife is reprimanding him and the child has an earache; he doesn't care about them, he has his own troubles."

This Story indicates that movement of a test form away from center point with back turned reflects hostility leading to indifference to others and withdrawal into self, while movement of forms apart yet facing each other reflects overt hostility but with positive interest instead of rejection, withdrawal or indifference.

*Example 6.* R. S., a 31-year-old woman, married, catatonic schizophrenic, called test form #21: "an old man stooped from work" and #12: "a monument of someone who passed on." #17 was completely ignored. No further verbalizations or manipulations were offered.

Here content is scored as Human for test form #21, Man-Made Object for test form #12, while test form #17 is scored as *not identified* (reflecting unbearable feelings about the self image leading to denial of the self). All three test forms are scored, *Not Touched.* Test forms #21 and #12 are scored as Isolate Ideas, and test form #21 is credited with Latent Action – "stooped from work." No Feeling Tones were verbally expressed.

*Example 7.* W. L., a 42-year-old man, alcoholic neurotic, gave the following Story to Testing of Limits:

"The Monkey [#17] is a pet of the woman [#12] but doesn't like her. He is tied to her but she doesn't like him.The man [#21] is afraid of the woman, yet he can't stay away from her; the monkey is interested in what the man will do but is not interested in him really."

No effort was made to touch the test forms.

Here content is scored as *Human* for test forms #12 and #21 and *Animal* for test form #17. The three forms are credited with being *related in the theme. No movement* is assigned to these three test forms but all three test forms are credited with being used both as *Objects* and *Agents.*

Feeling Tones explicitly stated include fear and striving for test form #21, hate and indifference for test form #17, and protective and hate for test form #12.

In Testing of Limits, as in the other parts of the 3-DPT performance, provision is made for scoring the following additional variables: (1) Agents or Objects not represented by test forms; (2) Total number of test forms used; (3) Total number of Agents and Objects introduced; (4) Verbal, Gesture and Total Reaction Times.

Gesture Reaction Time refers to the time that elapses from the end of directions given by the examiner to the first manual response made by the subject. Time here is recorded in seconds.

Verbal Reaction Time refers to the time that elapses from the end of directions given to the first word spoken by the subject. Time, here too, is recorded in seconds.

Total Time for Testing of Limits is counted in minutes from the moment the directions have been finished to the moment the subject's response to the directions are finished.

# Chapter II

# Social Structure of Sample Populations

The normal sample was obtained[1] during 1953 in Greenwich and Norwalk, Connecticut, where 30 women and 25 men volunteered to be tested with the 3-DPT for research purposes. This sample includes officers, tellers, secretaries and clerks of a local bank, as well as business and professional men and women, and housewives of these communities.

The child sample[2] was obtained and tested in Lillesved, Sweden, during the Children's International Summer Village held during July, 1953. At this village, were 53 children, ages 9 through 13, gathered together from 9 different countries to share in a camp experience designed to develop leadership for international peace. These children were selected by their national or local committees on the basis of their ability to make friends quickly and their high status among peers and adults. The countries represented in our sample include the United States, England, Sweden, Finland, Norway, France, Germany, Austria and Denmark. Each country contributed from 4 to 6 children.

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[1] Miss Julia Zygmont, Vice President of the First National Bank of Greenwich, obtained bank personnel, business and professional people for participation in this study.

[2] Children were tested by Leah Gold Fein, Doris T. Allen and Otto Ehrenberg, Motivation Research Director, Package Research Institute, New York.

The alcoholic sample includes 31 patients who were tested during 1953 when they came to seek help at the Stamford Clinic of the Connecticut Commission on Alcoholism. This clinic services the southern part of Connecticut and draws heavily from Greenwich and Stamford. These alcoholics are drawn from the middle and upper middle socioeconomic urban population (218).

The hospital sample of fifty patients was collected during the winter of 1952 and the spring and winter of 1953 at the High Point Hospital in Port Chester, New York. High Point Hospital, directed by Dr. Alexander Gralnick, is a small private hospital with 35 beds. Our sample represents the total population of this hospital for 1952 and 1953. The population at High Point draws heavily from Westchester County, Upper New York State, New Jersey and the southern part of Connecticut.

The patients at High Point, of necessity, come from the middle and the upper middle socioeconomic level of the urban population. This sample was selected in random order by the office secretary. The examiner had no information on these patients before testing. Only after the test records of the entire hospital sample were analyzed for the variables to be studied, did the examiner return to the hospital to obtain the social and medical histories and the psychiatric diagnoses. The diagnoses were made by the regular hospital staff on the basis of a diagnostic battery of tests including the Rorschach, the Wechsler Intelligence Scale for Adults, the Machover Draw-a-Person Test and/or the Thematic Apperception Test. This research procedure with the hospital sample was deliberately followed in order that these samples might serve as outside criteria for demonstrating the validity of the 3-DPT variables under examination.

The normal adult sample will be compared to the sick samples for age, years of schooling, occupations, number of siblings, rank among siblings, marital status, number of children, religion, and degree of religious observance in childhood home. The sick samples will be compared to each other in terms of age of onset of the illness, length of endurance of the illness before treatment was sought, and progress in a two-year period.

The child sample will be described in terms of the occupations of the fathers of the children, the number of siblings in the families, rank among siblings, religion, degree of religious observance in the childhood home, and marital status of the children's parents.

## Normal Adult Sample Compared to Sick Samples in Social Structure

TABLE 1

Mean Age at Time of Testing

| | N. Adults (55) | Alc.[*] (31) | Neur. (17) | Depres. (6) | Cata. (6) | Para. Schiz. (21) |
|---|---|---|---|---|---|---|
| Mean | 35.0 | 42.4 | 33.0 | 63.2 | 27.3 | 35.0 |
| Range | 17-56 | 22-66 | 17-51 | 51-81 | 17-46 | 17-61 |

[*] Alcoholic sample contains 17 neurotics and 14 psychotics—diagnoses based on battery of Draw-a-Person Test, Wechsler and Rorschach. These subjects are treated as one population, for the most part, in this study because it is general psychiatric practice to classify all compulsive drinkers as alcoholics.

On inspection, the data in Table 1 indicate that our normal adult sample was well matched in mean age to the neurotic and the paranoid schizophrenic samples with mean ages of 33 and 35, respectively, as compared to the mean age of 35 for the normal sample. In age range, these two sick groups were also similar to the normal adult sample. The catatonic sample was somewhat younger, as is to be expected, with a mean age of 27 years and a spread from 17 to 46 years. Involutional depressives were naturally older than the other sick samples. The alcoholic sample ran somewhat older than the normal sample, the neurotic sample, and the paranoid schizophrenic sample, with a mean age of 42 years and a spread from 22 to 66 years.

TABLE 2

MEAN YEARS OF SCHOOLING

| Years of School | N. Adults (55) | Alc. (31) | Neur. (17) | Depres. (6) | Cata. (6) | Para. Schiz. (21) | Total Sick (81) |
|---|---|---|---|---|---|---|---|
| Mean | 13.0 | 13.0 | 14.0 | 10.0 | 13.0 | 13.0 | 12.5 |
| Range | 6-18 | 7-19 | 10-17 | 6-14 | 11-15 | 8-18 | 6-19 |

The data in Table 2 indicate that the normal adult sample and the sick samples are similar in educational background as measured by the mean number of years of schooling. The depressives run somewhat below the others with a mean of 10 years of schooling as against 13 years for the other groups. The range in years of schooling for the normal adults was 6 to 18 years, while for the total sick group, the range was 6 to 19 years. This measure again indicates similarity in educational background of the samples in this study. Further evidence of similarity in educational background of the normal and sick samples is presented in Table 3.

TABLE 3

PERCENT DISTRIBUTION OF SAMPLES AT FOUR SCHOOL LEVELS

| Years of School | Normal Adults (55) | Total Sick (81) |
|---|---|---|
| 8 or less | 7% | 12% |
| 9-12 | 47% | 38% |
| 13-16 | 42% | 38% |
| 17 or more | 4% | 11% |

This measure of years of schooling suggests that our samples come predominantly from the middle and the upper middle socioeconomic levels, of the general population.

TABLE 4

OCCUPATIONAL LEVELS [*]

| Occupations | Normal Adults (55) | Alcoholics (31) | Hospitalized Subjects (50) |
|---|---|---|---|
| Professional | 7% | 3% | — |
| Managerial | 46% | 19% | 20% |
| Art | — | 3% | 14% |
| Clerical | 31% | 3% | 10% |
| Sales | 7% | 13% | 12% |
| Service | 7% | 26% | 22% |
| Skilled mech. | — | 19% | 4% |
| Semi-skilled mech. | — | — | — |
| Unskilled | — | 6% | — |
| Unemployed | 2% [**] | 6% | 14% [**] |

[*] All subjects were classified according to the *Directory of Occupational Listings*. Specific occupations represented are available for those interested.

[**] Students.

Inspection of the data in Table 4 reveals that the normal adult sample and the hospitalized sample function predominantly in the middle and the upper middle occupations. Among the alcoholics the occupational spread is much greater, extending from the highest occupational level to the lowest. The extreme spread among the alcoholics is in sharp contrast to the high educational level of this group. This difference between the educational and the occupational levels of alcoholics suggests that alcoholics tend to move down the occupational ladder as the disease makes inroads on their productivity.

TABLE 5

MEAN NUMBER OF SIBLINGS

| Siblings | Normal Adults (55) | Alcoholics (31) | Hospitalized Subjects (50) |
|---|---|---|---|
| Mean | 3.1 | 3.8 | 3.6 |
| Range | 1-9 | 1-8 | 1-9 |

The data in Table 5 indicate that the normal adult sample is closely matched to the sick samples on the basis of the number of siblings in the families.

TABLE 6

MEAN RANK AMONG SIBLINGS

| Rank Among Siblings | Normal Adults (55) | Alcoholics (31) | Hospitalized Subjects (50) |
|---|---|---|---|
| Mean | 2.1 | 2.0 | 2.1 |
| Range | 1-9 | 1-5 | 1-9 |

The data in Table 6 indicate that the older siblings of large families predominate in our samples. These data further suggest that rank among siblings is not a significant factor in the incidence of alcoholism and mental illness.

TABLE 7

MARITAL STATUS [°]

| Marital Status | N. Adults | Alc. | Neur. | Depres. | Cata. | Para. Schiz. | Hosp. Subj. |
|---|---|---|---|---|---|---|---|
| Single<br>Married[°°] | (25)<br>(30) | (1)<br>(30) | (6)<br>(11) | (0)<br>(6) | (4)<br>(2) | (11)<br>(10) | (21)<br>(29) |
| | % | % | % | % | % | % | % |
| Marriage intact | 95 | 31 | 55 | 50 | 100 | 60 | 65 |
| Marriage conflict | — | 3 | 18 | — | — | — | 18 |
| Separated | 2 | 24 | 18 | — | — | 30 | 24 |
| Divorced | — | 38 | 9 | 17 | — | — | 22 |
| Widowed | 2 | 3 | — | 33 | — | 10 | 13 |
| 2nd marriage | — | 21 | — | — | — | 10 | 10 |
| 3rd marriage | — | 7 | — | — | — | — | — |

[°] Subjects were asked, "Are you married?" The subjects' responses to this question provided the categories of classification used here.

[°°] Percentages are based on the number of married subjects in each sample rather than on the total number in each sample.

The data in Table 7 indicate that the normal adult sample differs from the sick samples in marital stability. The greatest marital instability is observed among the alcoholics, with paranoid schizophrenics in second position. It is noteworthy that alcoholics tend to remarry in spite of their severe marital difficulties. This need to be married among alcoholics may be explained by the alcoholics' dependency needs (31).

TABLE 8

STATISTICAL SIGNIFICANCE OF DIFFERENCE IN MARITAL STATUS BETWEEN NORMAL ADULTS AND SICK ADULTS

| Marital Status | Normal Adults (39) | Alcoholics (28) | Neurotics (11) | Psychotics (15) |
|---|---|---|---|---|
| Marriage intact | 38 | 9 | 6 | 11 |
| Marriage disturbed | 1 | 19 | 5 | 4 |
| | | p(ldf) = <.001 | p = <.001 | p = .025 |

The data in Table 8 indicate that the normal adult sample differs significantly[3] from the sick samples in the degree to which marriages are intact. The difference between normals and alcoholics and between normals and neurotics is significant at less than the 1/10 of 1 per cent (<.001) level of confidence. The difference between normals and psychotics is significant at the 2.5 per cent (.025) level of confidence. In other words, a normal sample may be distinguished from an alcoholic sample and from a neurotic sample in better than 99 times out of 100 on the basis of intact marriage, and a normal sample may be distinguished from a psychotic sample in better than 97 times out of 100 on the basis of intact marriage.

TABLE 9

MEAN SIZE OF FAMILIES IN SAMPLES STUDIED

| Number of Children | Normal Adults (30) | Alcoholics (29) | Neurotics (11) | Psychotics (18) |
|---|---|---|---|---|
| Mean | 1.1 | 2.0 | 1.2 | 1.4 |
| Range | 0-4 | 0-9 | 0-5 | 0-3 |

---

[3] Throughout this study, procedures for testing significance refer to Edwards, A. L., *Experimental Design in Psychological Research* (55), except where otherwise specified.

The data in Table 9 reveal that the normal sample matches the hospitalized neurotic and psychotic samples in mean number of children and in size of families. Thus the normals and the hospitalized samples have a mean of 1 and a range of 0-4 children. The alcoholics appear to have larger families than the normal and the hospitalized samples, with a mean of 2 and a range of 0-9 children.

### RELIGIOUS BACKGROUND

In the process of testing alcoholic subjects during 1952, the investigator (64) was impressed with the disdainful remarks offered voluntarily by many of the patients about the hypocrisy of their parents' attitudes toward religion. This experience suggested to the investigator that the degree of religious observance in the childhood home is significant in the maintenance of mental health. Consequently, while obtaining information on the religious composition of the samples, the investigator asked each subject the following two questions at the start of the test session: (1) "What is your religious background, i.e. what was the religion in your childhood home?" (2) "Would you describe the religious observance in your childhood homes as having been orthodox, liberal or token observance?"

It was expected that the question on degree of observance would significantly distinguish normal adults from mentally and emotionally sick adults. Normal adult samples were expected to derive from homes where religion was seriously observed either in an orthodox or a liberal fashion. Sick samples were expected to come from homes where religion was treated lightly. The religious composition of the samples in this study is presented in Table 10.

TABLE 10

RELIGIOUS COMPOSITION

| Religion | N. Adults (55) | Alc. (31) | Neur. (17) | Depres. (6) | Cata. (6) | Para. Schiz. (21) |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| Catholic | 42 | 55 | 12 | — | 17 | 5 |
| Jewish | 16 | — | 29 | 67 | 83 | 71 |
| Protestant | 42 | 45 | 53 | 33 | — | 19 |
| Mixed | — | — | 6 | — | — | 5 |

The data in Table 10 indicate that the normal sample is adequately representative of the three major religious groups in the general population of the United States. The alcoholic sample is typical of alcoholic populations generally. Alcoholism is a rare ailment among the Jewish population. The hospitalized sample appears to be heavily loaded with Jewish subjects, which fact, after a fashion, compensates for the lack of Jewish subjects in the alcoholic sample, thus providing a fairly adequate representation of the three major religious groups in our sick sample population.

TABLE 11

SIGNIFICANCE OF DIFFERENCES BETWEEN NORMAL ADULT SAMPLE AND SICK SAMPLES IN DEGREE OF RELIGIOUS OBSERVANCE IN CHILDHOOD HOME [*]

| Degree of Religious Observance | N. Adults (55) | Alc. (31) | Neur. (17) | Depres. (6) | Cata. (6) | Para. Schiz. (21) | Total Sick (81) |
|---|---|---|---|---|---|---|---|
| Orthodox | 32 | 11 | 3 | 3 | 3 | 5 | 25 |
| Liberal | 17 | — | — | — | — | — | — |
| Token | 6 | 20 | 14 | 3 | 3 | 16 | 56 |
| p(2df). 001 | | | | | | | |

[*] All sick samples differ significantly from the normal adult sample at the 1/10 of 1 per cent level of confidence.

The data in Table 11 indicate that normal adult samples can be distinguished from mentally and emotionally sick adult samples in better than 99 times out of 100 on the basis of the degree of religious observance in the childhood home. Normal adult samples come from homes where religion was apparently respected and so observed, while mentally sick samples, including alcoholics, neurotics and psychotics, come from childhood homes where religion was treated lightly or neglected altogether.

TABLE 12

DESCRIPTION OF SICK SAMPLES IN TERMS OF THE COURSE OF THE ILLNESS

| Age of Onset° of Illness | Alcoholics (31) | Neurotics (17) | Depressives (6) | Catatonics (6) | Para. Schiz. (21) |
|---|---|---|---|---|---|
| Mean | 30.3 | 24.9 | 62.3 | 24.9 | 29.5 |
| Median | 30.1 | 24.9 | 61.5 | 24.0 | 28.4 |
| Range | 17-61 | 7-51 | 52-81 | 12-36 | 17-51 |

° Age of onset was obtained from medical and social records at the hospital and clinic.

The data in Table 12 reveal that all sick samples except the involutional depressives have a mean age of onset between 25 and 30 years, with a spread of more than 40 years. The involutional depressives have a mean of 62 years at the time of onset of the illness with a spread of 30 years.

TABLE 13

MEAN ENDURANCE OF ILLNESS BEFORE SEEKING TREATMENT °

| No. of Years Ill Before Treatment | Alcoholics (31) | Neurotics (17) | Depressives (6) | Catatonics (6) | Para. Schiz. (21) |
|---|---|---|---|---|---|
| Mean | 9.3 | 5.0 | 0.3 | 0.4 | 2.3 |
| Median | 10.5 | 4.2 | 0.0 | 0.0 | 1.6 |

° This measure was obtained by subtracting the age of onset of each subject from the age at which the subject *first* sought treatment.

The data in Table 13 reveal that the alcoholic sample endured alcoholism for a mean period of 9 years before seeking treatment. The neurotic sample endured the neurosis for a mean period of 5 years before seeking treatment; the paranoid schizophrenic sample endured the ailment for a mean period of 2 years; while the depressives and catatonics received treatment soon after the onset of the disease. These differences in endurance of the different diseases suggest that families, communities, and patients themselves can tolerate alcoholic behavior for longer periods than they can tolerate neurotic behavior and psychotic behavior. Furthermore, they can tolerate neurotic behavior longer than the behavior of the paranoid schizophrenic, and they can tolerate the behavior of the paranoid schizophrenic longer than the behavior of involutional depressives and catatonics. Apparently the behavior of the involutional depressive and the catatonic cannot be tolerated for long in the free milieu of home and community.

TABLE 14

MEAN NUMBER OF TIMES HOSPITALIZED *

| Times Hospitalized | Alcoholics (31) | Neurotics (17) | Depressives (6) | Catatonics (6) | Para. Schiz. (21) |
|---|---|---|---|---|---|
| Mean | 2.7 | 1.4 | 1.2 | 1.5 | 1.6 |
| Median | 2. | 1. | 1. | 1. | 1. |
| Range | 1-6 | 1-3 | 1-2 | 1-3 | 1-3 |

* The data were obtained from medical case histories.

The data in Table 14 show that the alcoholics (even though they were ambulatory at the time of testing) were hospitalized more often than the neurotics and the psychotics. Alcoholics were hospitalized, on the average, 2 times while the other sick subjects were hospitalized, on the average, 1 time. Alcoholics were hospitalized from 1 to 6 times while the other sick samples were hospitalized from 1 to 3 times.

TABLE 15

Mean Number of Months in Treatment [*]

| No. of Months | Alcoholics (31) | Neurotics (17) | Depressives (6) | Catatonics (6) | Para. Schiz. (21) |
|---|---|---|---|---|---|
| Mean | 33.8 | 35.3 | 6.2 | 24.8 | 32.7 |
| Median | 24. | 24. | 2.5 | 6. | 24. |
| SD | 36.5 | 31.3 | 8. | 42.6 | 23.3 |
| Range | 2-180 | 4-116 | 2-24 | 4-120 | 3-96 |

[*] All periods of treatment prior to the present treatment were obtained from the medical history and were added to the present term of treatment (at time of checking progress in 1955).

The data in Table 15 indicate that all samples but depressives had received a mean treatment of at least 24 months, but less than 36 months. The range in treatment within each sample is extreme, indicating that our samples included subjects in the initial stages of illness through extended chronic conditions.

TABLE 16

Progress in Two-Year Period [*]

| Progress | Alcoholics (31) | Neurotics (17) | Depressives (6) | Catatonics (6) | Para. Schiz. (21) |
|---|---|---|---|---|---|
| None | 13% | —% | 17% | 17% | 10% |
| Improved—still in hospital | — | 12 | 17 | 17 | 24 |
| Out of hospital—office treatment | 23 | 59 | 50 | 50 | 57 |
| Recurrent | 39 | 24 | — | — | 10 |
| Recovered | 26 | 6 | 17 | 17 | — |

[*] Obtained from therapists' reports in 1955.

The data in Table 16 indicate that a small number of cases in each sample (except the neurotic sample) showed no improvement; about 50 per cent of the hospitalized subjects were released from the hospital to office treatment; a small number of cases in all but the paranoid schizophrenic sample was dismissed as recovered. The data further indicate that alcoholism was recurrent in a large number of cases; neurosis was also recurrent in a goodly portion of the cases, while paranoid schizophrenia recurred in very few cases. Involutional depression and catatonia did not recur in the samples studied here.

## Summary on Social Structure of the Adult Samples

The data reported in this section indicate that the normal adult sample was well matched to the total sick sample on mean age, years of schooling, occupations, number of siblings, rank among siblings, and number of children. The normal sample and the total sick sample adequately represented the three major religious groups in the general population. The data further indicate that the normal sample had significantly more stable marriages than had the sick samples. Also, the normal sample came from childhood homes where religion was seriously observed in contrast to the sick samples which came from homes where religion was treated lightly. The data further indicate that each of the sick samples represented various stages of the particular illness, i.e., from the initial stages of each illness through the chronic stages.

## Social Structure of Child Sample

The child sample, as was indicated earlier, contained 53 children from nine different countries. The mean age of the children was 12.5 years, the median age was 12.5 years, and the range in age was 9 to 13 years. These children represented predominantly two religious groups with 36 Protestants (of several different sects) and 10 Catholics. Two children were from mixed religious homes. These data were not available for 5 children. The child sample came, predominantly, from intact homes, with 86 per cent having both parents in the home; 12 per cent having one parent in the home, one parent being deceased; and 2 per cent (1 child) having one parent in the home, the parents having been divorced. The children came from average-size families with a mean of 2.7 siblings, a median of 3 siblings, and a range of 1 to 8 siblings. The children in the sample were among the older siblings, with a mean rank among siblings of 1.8, a median rank of 1, and a range from 1 to 8. The socioeconomic level of the child sample spread from working class through professional, as evidenced by the occupational distribution of the fathers: professional, 15; managerial, 9; art, 8; sales, 4; skilled, 3; service, 3; secretarial, 1; semi-skilled, 1; unknown, 9.

# Chapter III

## Statistical Reliability of the 3-DPT

Statistical reliability of a measuring instrument indicates the degree to which the instrument measures consistently, from testing to testing, whatever it is supposed to measure. The statistical procedure involved requires correlation of two scores or values obtained by each individual on comparable test material. This statistical procedure is commonplace and relatively clear-cut in the standardization of objective tests. On the other hand, the job of determining the reliability of a projective test appears to be fraught with many insurmountable obstacles (225, p.8).

There are two aspects to the reliability of an instrument. One deals with scorer reliability, i.e., consistency among different scorers, and the other deals with the consistency of the subject's response to the test at repeated administrations. Test reliability may also be measured by determining the correlations between different item scores and total scores on the test. This test of reliability is called the test of internal consistency. In objective test standardization, the task of establishing scorer reliability is fairly mechanical, especially since machine scoring was introduced. The second task, that of establishing repeat reliability or consistency of test results by repeated testings, is again a simple matter since test items can be so objectified that subjective influences are practically eliminated.

In projective testing, the problem of establishing interpreter reliability is dependent "somewhat on the nature of the protocol being interpreted, the training and competence of the interpreter, and the conceptual scheme employed in interpretation" (225, p. 4).

Tomkins reports that interpreter reliability discloses reliability coefficients ranging from +.30 to +.96. He concludes: "Reliability in the rating of material as complex as TAT protocols will not come easily. It will be an achievement requiring the active co-operation of psychologists on a nation-wide basis" (225, pp. 2, 5).

Projective tests generally have not been subjected to statistical reliability tests because of the nature of the behavior sampled by such tests.

Klopfer et al. hint at the difficulties of statistical standardization of the Rorschach test in the following statement:

> In the Rorschach technique, scoring is a process of classification. Responses that are similar with respect to some significant characteristic are classified together and assigned the same scoring symbol. Quantification enters in only when a frequency count is made of the responses in each scoring category, and when these frequencies are compared in terms of absolute number, percentage or ratio. The only score that is directly quantitative is form-level rating, . . . . .
>
> In the application of any system of classification, differences of opinion are likely to arise when responses fall on the borderline between one class and another [124, p. 19].

It is apparent from the foregoing that the task of establishing scorer and interpreter reliability for projective tests is one of great delicacy, because it calls for a generally acceptable conceptual scheme, precision of definition of scoring categories, and constant effort on the part of the interpreter to maintain objectivity when interpreting dynamics from verbal or other observable behavior.

With respect to retest reliability, Tomkins found that reliability coefficients vary with three conditions:

> 1. Time between successive administrations, i.e., the greater the time span, the less the reliability.
>
> 2. Stability of the personality, i.e., the more malleable the subject, the lower the consistency of the test.
>
> 3. Transitory fluctuations in the feelings and moods of the subject being tested, i.e., environmental stress conditions can affect the consistency of measurement of the TAT [224, p. 6].

Rapaport (178, pp. 87-88) has made the most comprehensive study to date of the validity of the Rorschach as a diagnostic instrument of personality deviations. His efforts amply demonstrate the complexity of the task in standardizing a projective test.

Recognizing the many difficulties of determining statistically the consistency of measurement of interpretive data of a projective test, the present investigator attempted to avoid these pitfalls by subjecting to statistical treatment only such test behavior variables that can be operationally defined and that are directly quantifiable and/or at least quantifiable with minimal influence of subjective judgment.

## TEST-RETEST METHOD

The administration steps of the 3-DPT uniquely favor the test-retest technique of determining the consistency with which it measures certain fairly constant behavior variables.

In 3-DPT administration, the subject is tested twice on his response to directions which call for ability to treat a complex, unstructured problem situation in a goal-directed manner. That is, the subject is directed to select as many test forms as he wishes from a standard arrangement of 28 test forms, and to place the selected test forms on a second table. He is then expected to tell one Story, using the test forms he has selected. After a Naming Test, the subject is again asked to select test forms and use them in one Story.

Thus, the two testings are separated by a Naming Test which lasts from 15 to 30 minutes. The brevity of the time span between the Story testings eliminates the influence of maturational changes in test behavior and keeps environmental changes at a minimum.

The 3-DPT, by the very nature of its construction, has the potential for inducing transitory fluctuations in the feelings and moods of the subject being tested. Therefore, it was expected that the test would not measure consistently, from Pretest to Posttest such behaviors as are influenced by anxiety-producing stimuli. However, there are certain behavior patterns that are *fairly resistive to change under momentary situational stress*. These patterns are generally viewed as *basic traits* or *Characteristic patterns* of the *individual's personality*.

Characteristic behavior patterns readily measured by the 3-DPT are Rate of Performance and Language Patterns. These behavior patterns are resistive to change and are normally distributed in the general population. Therefore, they were selected for statistical reliability tests to determine the degree to which the 3-DPT measures consistently the relatively stable core of the individual personality.

## RATE OF PERFORMANCE

The measure of Rate of Performance was defined here as the total amount of time the subject took to complete his performance in response to directions. Total time represents the time that elapses from the end of directions given by the examiner to the end of the subject's response to these directions. This includes his entire Production, verbal and manipulative. If the subject begins his Production before directions are finished, then Total Time begins from the moment the subject begins his Production.

Rapaport views as unreliable the use of "total time spent on each card" of the Rorschach test. He states that "we cannot use this as a reliable measure since we usually encourage second responses, thereby artificially extending the time; and the necessities of verbatim recording sometimes require the subject to 'hold it' until the examiner can catch up" (178, pp. 127-128).

In the 3-DPT, there is no possibility of artificially extending Total Time by encouragement for second responses, since the directions call for only one Story. There are subjects who try to get help from the examiner by asking for clarification of directions. In these situations, the examiner simply repeats the directions, at no time interpreting the directions for the subject. The time consumed by the subject's requests and examiner's repetition of directions is included in Total Time since the events described reflect the subject's response to the test directions and test situation.

The second objection to Total Time raised by Rapaport, namely, the difficulty of verbatim recording, need not be an obstacle excluding the use of Total Time as a behavior variable. Mature examiners, using projective tests, can stop the watch when the subject stops producing and then finish the recording without undue error. They have good retention of observable behavior, both verbal and motor, and they characteristically have some shorthand system which they can readily translate. Thus, little lag need occur between the subject's performance and the examiner's recordings.

### LANGUAGE PATTERNS

Language Patterns have some objective features convenient for statistical treatment, namely, total amount of language used and variety of parts of speech used.

In the 3-DPT, there are two measures of amount of language used: one reflects all language used in response to the test directions; this total is called Number of Words in the Production; the other refers to the number of Words in the Story.

Variety of language is measured by the number of nouns and different nouns, verbs and different verbs, different adjectives, and different adverbs.

Each of the variables described above were counted in the Pre- and Postnaming performances of all tested subjects, and correlations were obtained between the pretest and posttest scores for each sample population, separately. Then each squared coefficient was tested for statistical significance.

### STATISTICAL SIGNIFICANCE OF RELIABILITY COEFFICIENTS ON RATE OF PERFORMANCE AND LANGUAGE PATTERNS

The data in Table 17 support our expectations that performance rate and language patterns are resistive to the anxiety-rousing qualities of the 3-DPT. The data also provide statistical evidence of the consistency of the 3-DPT in measuring whatever it purports to measure. Further, they indicate that in normal population samples the 3-DPT measures Rate and Language Patterns significantly better than chance, or to put it another way, the 3-DPT measures these patterns consistently 99 times out of 100, both in normal adult and normal child population samples.

TABLE 17

RELIABILITY COEFFICIENTS ON RATE AND LANGUAGE PATTERNS IN NORMAL GROUPS

| | Sample Populations | |
|---|---|---|
| Variables | Normal Adults (55) | Normal Children (53) |
| Total Time | .345° | .356° |
| Production Words | .562° | .423° |
| Story Words | .544° | .430° |
| No. of Nouns | .318° | .450° |
| No. of Verbs | .422° | .494° |
| No. of Different Adjectives | .458° | .491° |
| No. of Different Adverbs | .552° | .305° |
| No. of Different Nouns | .382° | .511° |
| No. of Different Verbs | .386° | .475° |

° Significant at the 1 per cent level (55, pp. 123-126).

Arthur Hartman of the Research Center for Mental Health in New York calculated the tests of significance using the following formula:

$$t=\frac{r}{\sqrt{1-r^2}}(\sqrt{n-2}) \qquad t^2=\frac{r^2(n-2)}{1-r^2} \qquad t^2 \text{ with 1 degree of freedom}$$

Would the 3-DPT also measure these characteristic traits consistently in pre- and posttestings of sick population samples? It was expected that consistency in measurement would be lowered in sick samples due to the effects of free-floating, mobile anxiety felt by the subjects characteristically as well as due to the effects of the anxiety-rousing elements in the 3-DPT. Thus, the freer the anxiety and the more intensely it is experienced by the subject, the more fluctuating the performance. In other words, it was expected that the defense-shaking influences of the 3-DPT material would produce fluctuations in the anxiety level of sick groups, thus lowering the consistency of their performance.

These expectations were tested by correlating the Prenaming and Postnaming performances of ambulatory alcoholics, hospitalized neurotics and psychotics.

Ambulatory alcoholics generally experience intense anxiety; so we would expect erratic test performance with low statistical significance in obtained correlations. The neurotics would be expected to experience intense anxieties outside of a hospital setting (i.e., when exposed to a complex, partially structured social milieu), but in a controlled hospital setting, their anxieties were expected to be substantially reduced, but still moderately experienced. Thus it was expected that their performances on the 3-DPT would be moderately consistent from Prenaming to Postnaming testings on these resistive traits.

The psychotics were a mixed group with a few very anxious depressives, a few catatonics and a fairly good-sized sample of paranoid schizophrenics. We expected erratic performance on these variables in the depressive group because of their intensely felt anxieties. We expected a high consistency in the performance of the catatonics because of their relative inaccessibility to stimuli, while in the paranoid schizophrenics we expected a high consistency because of their well developed intellectual defense systems. However, we also expected that the anxiety level among our catatonic and paranoid schizophrenic groups would fluctuate somewhat due to the defense-shaking properties of the 3-DPT, thus causing spotty fluctuations in rate and language variables.

The data in Table 18 present the squared correlation coefficients with tests of significance on each sample's performance. The statistical tests made on depressives and catatonics cannot be accepted with confidence because of the smallness of these two samples. However, the results are presented to show trends.

TABLE 18

RELIABILITY COEFFICIENTS ON RATE AND LANGUAGE PATTERNS IN SICK POPULATION

| | Population Samples | | | | |
|---|---|---|---|---|---|
| Variables | Alcoholics (31) $r^2$ | Neurotics (17) $r^2$ | Depressives (6) $r^2$ | Catatonics (6) $r^2$ | Paranoids (21) $r^2$ |
| Total Time | .168* | .000 | .508 | .136 | .052 |
| Production Words | .010 | .162 | .012 | .693** | .142** |
| Story Words | .002 | .363* | .028 | .787* | .245** |
| No. of Nouns | .002 | .235** | .229 | .215 | .112 |
| No. of Verbs | .005 | .236** | .057 | .813* | .303* |
| No. of Different Adjectives | .007 | .191** | .523 | .825* | .001 |
| No. of Different Adverbs | .000 | .418* | .488 | .003 | .315* |
| No. of Different Nouns | .012 | .160 | .266 | .163 | .036 |
| No. of Different Verbs | .003 | .224** | .159 | .625** | .398* |

*Significant at the 1 per cent level.
**Significant at the 5 per cent level.

The data in Table 18 indicate that the language patterns of ambulatory alcoholics fluctuate significantly while rate of performance is consistent at the .01 level of confidence. These results support our hypothesis about the tendency of free-floating anxiety to effect changes in resistive behavior patterns like language. Why the rate of performance was not upset by the free-floating anxiety is puzzling, since it was expected that rate of performance and amount of language would be significantly correlated. Tests of this hypothesis will be presented further on.

It was stated earlier that the neurotic sample was expected to perform rather consistently in the rate and language patterns as measured by the 3-DPT. The statistical data in Table 18 support our expectations. The neurotic sample performed at a significantly consistent level in six language variables, but they were erratic in Rate of Performance, and two language patterns, namely, Number of Words in Production and Number of Different Nouns. It is likely that this erratic performance was due to the influence of situational anxiety roused by the test situation.

The data on the depressives reflect inconsistent Prenaming to Postnaming performance on Rate and Amount of Language as measured by the 3-DPT. Although these data must be viewed simply as reflecting a trend because of the smallness of the sample, nonetheless, they lend support to our expectations that a high level of anxiety produces significant changes or fluctuations in these fairly resistive personality traits.

The statistical data on the catatonics and paranoid schizophrenics reflect fluctuations between Prenaming and Postnaming performance for half the variables and consistency for the other half. These results suggest that, from time to time, the 3-DPT penetrates the repressive defenses of these schizophrenic groups, thus sporadically raising the anxiety level, and, further, that such increases in anxiety level produce fluctuations in test performance on these characteristic behavior patterns.

In summary, it appears, from the use of the test-retest reliability formula that the 3-DPT is a reliable measuring instrument since it consistently measures Total Time of Performance and Amount of Language in normal population samples. The anxiety-producing elements of the 3-DPT do not appear to effect performance in these behaviors among normals. However, among sick population samples, the felt level of anxiety in addition to the anxiety-producing elements of the 3-DPT cause fluctuations in test-retest performance in some of these behavior variables.

## MEASURING BEHAVIOR TRAITS SENSITIVE TO ANXIETY-ROUSING TEST PROPERTIES

The 3-DPT forms and tasks have a high potency stimulus value which penetrates the defenses of the subject so that anxiety is released and made manifest by changes in test behavior.

### REACTION TIMES

Evidence of change in the anxiety level of the subject may be found in the subject's reaction times to test directions. Reaction time in the 3-DPT has two dimensions, Gesture Reaction Time and Verbal Reaction Time. Gesture Reaction Time refers to the time elapsing from the end of given directions to the moment the subject reaches for a test form. Verbal Reaction Time refers to the time extending from the end of given directions to the very first word uttered by the subject. These reaction times are indices of speed or rate of production just as Total Time is such an index. However, in contrast to Total Time, reaction times, though stable in habitual situations, are more readily altered under stress and anxiety. It was expected therefore that these two reaction times would not be measured consistently by the 3-DPT due to the anxiety-rousing influences of the 3-DPT Prenaming and Naming tasks on the subject's Postnaming performance. Also, the complexity of the assigned tasks was expected to produce some fluctuations in reaction times.

The Prenaming and the Postnaming tasks both call for the development of a Story around selected test forms, but these tasks differ in that the subject meets the Postnaming directions as a familiar problem, having already been given the directions in the Prenaming tasks. This difference, combined with the released anxieties resulting from the Prenaming and Naming tasks, would tend to cause fluctuations in Gesture and Verbal Reaction Times. It is essential to bear in mind that in spite of the effects of practice operative in the Postnaming task, it remains complex. This is caused by the multiplicity of unstructured stimuli presented at one and the same time, and the need for visual perception and selection and manipulation of test forms in a goal-directed manner, so that associations given to the test forms are linked into a theme with a logical sequence of ideas.

TABLE 19

CONSISTENCY OF REACTION TIME VARIABLES IN 3-DPT PRODUCTION

| Variables | POPULATION SAMPLES | | | | | | |
|---|---|---|---|---|---|---|---|
| | N. Adults (55) $r^2$ | N. Children (53) $r^2$ | Alc. (31) $r^2$ | Neur. (17) $r^2$ | Depres. (6) $r^2$ | Cata. (6) $r^2$ | Para. Schiz. (21) $r^2$ |
| GRT | .001 | .036 | .565* | .220* | .287 | .038 | .116 |
| VRT | .238* | .004 | .342* | .309* | .426 | .035 | .103 |

* Significant at the 1 per cent level (153, pp. 299-302).

The data in Table 19 indicate that reaction times, both gesture and verbal, fluctuate significantly from Prenaming to Postnaming Production in child and psychotic samples. These findings lend support to our expectations that reaction times are sensitive to the anxiety-rousing elements of the 3-DPT. It is noteworthy, however, that among alcoholics and neurotics the two reaction times were significantly consistent from the Prenaming to the Postnaming Productions, while among normal adults only the Verbal Reaction

Time was consistent from Prenaming to Postnaming Production. The consistency of the Verbal Reaction Time among the normal adults may be due to the fact that verbal reactions are expected to come after gesture reactions in this test situation. Thus the normal adult has time to recover from the initial situational anxiety (roused by the Prenaming and the Naming tasks) reflected in the erratic Gesture Reaction Time.

Why alcoholics and neurotics displayed statistically consistent reaction times on both the gesture and the verbal level is puzzling. It may be that because of the high level of free-floating anxiety already present in these two groups there isn't the same degree of puncturing of defenses and sudden eliciting of anxiety. These two groups appear to react impulsively in threatening situations so that both their Verbal and Gesture Reaction Times are consistent in repeated testings.

Generally, it appears from the results presented that the consistency of the Gesture and Verbal Reaction Time variables is blurred by the disturbing influence of the Prenaming and Naming tasks on the Postnaming performance of the subjects tested. This suggests that a truer measure of the reliability of the 3-DPT in measuring the reaction time variables would be obtained by dispersing the anxiety-rousing influence of the Prenaming and the Naming tasks on the Postnaming performance.

### LANGUAGE VARIABLES

The difference between Number of Words in the Production and Number of Words in the Story in the Prenaming and Postnaming performances was expected to vary under the impact of the stimulus potency of the 3-DPT forms and the penetrating influences of the 3-DPT Prenaming and Naming tasks. This difference was viewed as an index to level of situational anxiety.

TABLE 20

Consistency of Production to Story Words

| Variables | POPULATION SAMPLES | | | | | | |
|---|---|---|---|---|---|---|---|
| | N. Adults (55) $r^2$ | N. Children (53) $r^2$ | Alc. (31) $r^2$ | Neur. (17) $r^2$ | Depres. (6) $r^2$ | Cata. (6) $r^2$ | Para. Schiz. (21) $r^2$ |
| Production Words to Story Words | .068 | .243° | .001 | .000 | .019 | .067 | .020 |

° Significant at the 1 per cent level (153).

The data in Table 20 indicate that, for all adult groups there was no statistically significant correlation between the Prenaming and Postnaming Ratio of Production Words to Story Words. These findings lend support to our expectations that the difference between Production Words and Story words is affected by the anxiety-rousing properties of the 3-DPT situation. It is noteworthy that only the child sample reflected statistically significant consistency in this word count ratio. These findings are not surprising in view of the fact that children are more likely to express felt anxiety through increased motor behavior than through gratuitous verbalizations. Anxiety in children can be clinically observed in excessive motor behavior such as restlessness, wiggling, twisting, jumping from task to task and random movements. In contrast, adults reflect increased anxiety primarily by increased gratuitous verbalizations.

These data suggest that the Difference between Prenaming and Postnaming Ratio of Production to Story Words in the 3-DPT serves as an index to level of felt situational anxiety, roused in adults, both normal and sick, but it does not serve as an index to 3-DPT situational anxiety among children.

## MANIPULATION VARIABLES

It was expected that the 3-DPT situation would cause fluctuations in motor or manipulation variables in immature groups. Such fluctuations were viewed as indices of anxiety in children and other immature personalities.

To test this expectancy two manipulation variables elicited by the 3-DPT on the Prenaming and Postnaming Productions were correlated and tested for statistical significance. These two manipulation variables are identified operationally as Number of Test Forms Selected and Number of Test Forms Added. They are viewed as symbolic of a subject's characteristic motor behavior in a complex environmental situation. These variables were expected to remain constant in habituated conventional situations. However, under stress conditions such as novel, unstructured problem situations like those presented by the 3-DPT, they were expected to fluctuate from Prenaming to Postnaming Performance in all but the normal adult sample. The rationale for our expectations of consistency in the normal adult sample and inconsistency in child and sick samples was based on the assumption that mature individuals could and would follow directions given in spite of situational anxiety, whereas immature individuals would not, and could not follow directions adequately in the face of situational anxiety.

It will be recalled that the directions to the 3-DPT Productions require that the subject select test forms, as many as he wishes, place them on the second table, and then tell a story using the test forms selected in one Story. In view of the specificity of the directions given, it was expected that normal adults would be able to guide their actions in a goal-directed manner in spite of the complexity of the task and in spite of the anxiety-rousing effects of the 3-DPT tasks. Thus, normal adults would be consistent in the Number of Test Forms Selected for the development of a logical Story. Further, normal adults would be consistent in the Number of Test Forms Added, since they were not expected to add test forms once they had begun their Stories, in view of the directions given.

In the 3-DPT, adding test forms after the Story is begun was viewed as impulsive, inadequately planned, opportunistic, and as such, immature behavior. Such behavior was rarely anticipated in normal adult performance. On the other hand, impulsive, opportunistic behavior as reflected by the Number of Test Forms Added was expected to be common to immature groups like children and sick subjects.

TABLE 21

CONSISTENCY OF NUMBER OF TEST FORMS SELECTED AND ADDED

| Variables | POPULATION SAMPLES | | | | | | |
|---|---|---|---|---|---|---|---|
| | N. Adults (55) $r^2$ | N. Children (53) $r^2$ | Alc. (31) $r^2$ | Neur. (17) $r^2$ | Depres. (6) $r^2$ | Cata. (6) $r^2$ | Para. Schiz. (21) $r^2$ |
| Test Forms Selected | .149* | .004 | .028 | .014 | .715** | .397 | .009 |
| Test Forms Added | .123* | .281* | .004 | .016 | .005 | .135 | .008 |

* Significant at the 1 per cent level (153).

** Significant at the 5 per cent level (153).

The data in Table 21 indicate that the two manipulation variables, Number of Test Forms Selected and Number of Test Forms Added, are measured consistently at the 1 per cent level of confidence in normal adult samples. This finding suggests that these two variables are strongly resistive to change, are characteristic behavior traits, and as such demonstrate the statistical reliability of the 3-DPT as a measuring instrument. These results suggest also that normal adults are able to develop their actions in a goal-directed manner in the face of a novel unstructured problem situation such as is presented by the 3-DPT in spite of its anxiety-rousing elements.

The data in Table 21 indicate further that child samples show little consistency in the Number of Test Forms Selected, but display significant statistical consistency (at the 1 per cent level of confidence) in the Number of Test Forms Added. The difference between these two variables in child samples suggests that, under pressure of situational anxiety, children approach a novel unstructured problem situation erratically, i.e., select test forms erratically, at times cautiously and at times impulsively. However, once the children have entered the situation, they move along, i.e., add test forms consistently in a spontaneous, opportunistic manner.

In contrast to the consistency of normal adult performance in these two manipulation variables and the consistency of child performance on the Number of Test Forms Selected, is the inconsistency of the sick groups in both of the variables. The significant differences between normal adult samples and sick samples in these variables suggest that sick subjects are very vulnerable to situational anxiety such as is roused by the tasks of the 3-DPT. Under pressure of this anxiety, they vacillate in motor behavior from impulsive to inhibited behavior and conversely, both in their approach to a novel unstructured problem situation (reflected by the inconsistent behavior in the Number of Test Forms Selected) and their continued efforts to solve the problem (reflected by the inconsistent behavior in the Number of Test Forms Added).

In summary, it appears that Gesture Reaction Time, Verbal Reaction Time and Ratio of the Production Words to Story Words are uniquely sensitive to the anxiety-rousing elements of the 3-DPT situations. To use these variables as criteria of reliability it is essential to disperse the anxiety effects of the 3-DPT tasks on these variables. The two manipulation variables, Number of Test Forms Selected and Number of Test Forms Added, are not sensitive to the anxiety roused in normal adults by the 3-DPT situation, and as such these manipulation variables are useful criteria of the reliability of the 3-DPT as a measuring instrument. In testing children, Number of Test Forms Selected seems to be sensitive to the situational anxiety roused by the 3-DPT tasks, while the Number of Test Forms Added is not. The latter thus appears to be a useful index to immaturity. Both of these manipulation variables appear to be equally vulnerable to the situational anxiety roused in sick subjects by the 3-DPT tasks.

## Intratest Consistency of the 3-DPT

It is apparent from the data presented that the anxiety-rousing influences of the 3-DPT cause fluctuations in some characteristic behavior patterns when the two testings are separated by the Naming Task. In other words, the anxiety roused by the several 3-DPT tasks interferes with some statistical tests of reliability of the 3-DPT.

In an effort to disperse the influence of the anxiety-rousing elements of the 3-DPT tasks, the investigator tested the reliability of the 3-DPT by obtaining intratest correlations of some of the characteristic behavior variables already examined by the test-retest reliability method.

The variables in the Prenaming and Postnaming Productions and Stories were counted as separate observations, thus doubling the number of observations in each sample and increasing the predictive value of our statistical measures while at the same time dispersing the anxiety-rousing influences in each sample.

Incidentally, these intratest coefficients may also be regarded as evidence of the validity of the 3-DPT. The validity of an instrument is determined by the degree to which the instrument measures consistently that which it intends or is designed to measure. The 3-DPT is designed to measure personality functions. Rate of production and language variables are functions of personality. Therefore, if the 3-DPT measures these variables consistently, it is a valid instrument for measuring personality functions.

### RATE OF PRODUCTION

Total Time consumed for the development of a Production as well Total Number of Words given in a Production are two sides of one coin, for both these variables are indices of Production Rate. It was therefore expected that these two variables would be highly correlated, i.e., that they would fluctuate in the same direction within each subject's performance. Specifically, it was expected that as a subject's Total Time increased, his Total Words would increase and conversely, as total time decreased, total words would decrease. This covariance was expected to be true in all sample groups, i.e., among normal adults and children as well as among sick populations.

TABLE 22

CORRELATION OF TOTAL TIME TO PRODUCTION WORDS

| Variables | POPULATION SAMPLES | | | | | | |
|---|---|---|---|---|---|---|---|
| | N. Adults (110) $r^2$ | N. Children (106) $r^2$ | Alc. (62) $r^2$ | Neur. (34) $r^2$ | Depres. (12) $r^2$ | Cata. (12) $r^2$ | Para. Schiz. (12) $r^2$ |
| Total Time to Total Words | .047** | .116* | .246* | .452* | .176 | .697* | .458* |

* Significant at 1 per cent level (153).

** Significant at 5 per cent level (153).

The data in Table 22 quite generally support our expectations, namely, that Total Production Time and Total Production Words are positively correlated in a subject's performance. Specifically, these data indicate that a significant correlation occurs in 95 cases out of every 100 normal adults and in 99 cases out of every 100 normal children, alcoholic samples, hospitalized neurotics, catatonics and paranoid schizophrenics. Among psychotic depressives these two variables do not appear to covary to a statistically significant degree. The lack of statistical significance among depressives can not be viewed as conclusive because of the small number of cases. However, it may be viewed as a trend and may perhaps be explained by the fact that the generalized retardation among depressives would tend to extend the total time consumed for the task, while their verbalizations might be increased by irritability or decreased by perplexity over and beyond the influence of their general retardation. Generally, however, these data support our expectations that Total Time and Total Production Words are measured consistently by the 3-DPT not only in normal groups (Table 17), but in all populations when the anxiety-rousing elements of the several 3-DPT tasks are controlled. These results provide evidence that the 3-DPT is a reliable and valid instrument for measuring these functions of personality. It is noteworthy that the correlation between these two variables is greater in some groups than in others as reflected by the size of the squared coefficients. Thus it may be observed that Total Time and Total Words have a much higher relationship among catatonics than among all the other groups. Hospitalized neurotics and paranoid schizophrenics show a slightly smaller relationship between these two variables than do catatonics, but they show a higher relationship than do normal adults and children, alcoholics and depressives. This means that more accurate predictions from one variable to the other can be made for catatonics, and paranoid schizophrenics than for normals, alcoholics and depressives.

### CORRELATION BETWEEN TOTAL WORDS IN PRODUCTION AND STORY

Total Number of Words in the Production (p. 23) is not only an index to rate of production but is also an index to drive, rigidity, fluidity, flexibility, anxiety and/or depression since these dynamics influence a subject's verbal productivity. These dynamics are functions of personality.

The Number of Words in the Story is a variable contained within the Total Word Count and thus also serves as an index to the dynamics of personality.

In view of the test directions (i.e., "Select test forms and give a story using your selected test forms in one story") it was expected that the total Production Word Count and the Story Word Count would vary in the same direction and would be about equal in count. Thus a very high positive correlation was expected between these variables in all populations.

The data in Table 23 support our expectations that Production Words and Story Words are significantly correlated at the 1 per cent level of confidence in all populations. These data provide evidence of the reliability and validity of the 3-DPT in measuring personality functions as reflected by language patterns, when the anxiety-rousing influences of the several 3-DPT tasks are controlled (Compare to Table 18). In all populations, the number of words used in the production and the number of words used in the story will vary in the same direction 99 times out of 100.

TABLE 23

CORRELATION OF PRODUCTION WORDS TO STORY WORDS

| Variables | POPULATION SAMPLES | | | | | | |
|---|---|---|---|---|---|---|---|
| | N. Adults (110) $r^2$ | N. Children (106) $r^2$ | Alc. (62) $r^2$ | Neur. (34) | Depres. (12) | Cata. (12) | Para. Schiz. (42) |
| Production Words to Story Words | .567° | .99° | .835° | .809° | .683° | .907° | .925° |

° Significant at 1 per cent level (153).

The differences in the squared coefficients in Table 23 indicate that Production Words and Story Words are much more closely related in some groups than in others, although they vary significantly in the same direction in all groups.

The differences in the coefficients indicate that our expectation of equality in size between these two variables was not fully justified for all groups. Our expectation holds true for children and pretty much for catatonics and paranoid schizophrenics. This means that predictions of one variable from the other would be highly accurate for these groups. Alcoholics and neurotics appear to have a slightly bigger difference between Production and Story Words but the squared coefficients still permit quite accurate prediction of one variable from the other. The coefficients indicate that among children 99 per cent of the change in one of the variables will explain variation in the other variable. This apparently means that when children are asked to give a Story in the 3-DPT they consider most of their verbal offerings as part of their Story. Among catatonics and paranoid schizophrenics about 90 per cent of the change in one variable will explain variation in the other variable. This appears to mean that in the 3-DPT the catatonics and paranoid schizophrenics may acknowledge a few words outside of their Story, but for the most part their verbal offerings (as among children) are considered by them as part of their Story.

Alcoholics and neurotics appear to feel freer to acknowledge some verbalizations outside of the Story proper, so that 80 per cent of variation in one variable is explained by variation in the other variable.

Normal adult samples and psychotic depressive samples appear to feel much freer than the other groups to acknowledge verbalizations extraneous to the required Story. This freedom to deviate from directions is reflected in the squared coefficients of each of these samples. Among normal adults only 58 per cent of variation in one variable can be explained by variation in the other variable, while among depressives 68 per cent of variation in one variable can be explained by variation in the other variable.

It is noteworthy that normal adults make much use of parenthetical and explanatory phrases, pertinent, but peripheral to their Story proper. These peripheral phrases apparently account for the difference between Production and Story Words among normal adults. Depressives, on the other hand, tend to use many words protesting their disabilities and reminiscing about their former abilities. These types of personal verbalizations tend to increase differences between the Production and Story Words of depressives.

Since the tested subjects themselves determine what part of their Production is the Story, these data permit the inference that children (ages 9-13) think they are following directions to the letter; catatonics and paranoid schizophrenics also appear to believe they are fully complying with directions; alcoholics and neurotics take some freedom to verbally structure the situation; and depressives and normal adults take much freedom to verbally structure the situation.

### LANGUAGE VARIABLES

The number of words in a 3-DPT Story was expected to be predominately accounted for by the Number of Different Nouns, Different Verbs, Different Adjectives and Different Adverbs. It was therefore expected that the Different Words in these four parts of speech categories would vary in the same direction as the Number of Words in the Story so that as the Total Words of the Story increased, the Parts of Speech would increase, and vice versa.

To test this expectancy, a multiple correlation was run with the Number of Story Words used as the criterion of measurement. The number of observations were doubled by counting the Total Words used and the Different Words in the four parts of speech categories in the Prenaming and Postnaming Stories given by each subject, as separate observations. The correlations were based on Different Nouns, Different Verbs, Different Adjectives and Different Adverbs rather than Total Nouns, etc., in order to eliminate the influence of perseveration that commonly occurs in records of sick subjects.

The correlations between the Story Words and the proportions of the different words used in the four parts of speech categories are presented in the Table 24.

TABLE 24

MULTIPLE CORRELATION OF STORY WORDS TO PARTS OF SPEECH

| Variables | POPULATION SAMPLES | | | | | | |
|---|---|---|---|---|---|---|---|
| | N. Adults (110) $r^2$ | N. Children (106) $r^2$ | Alc. (62) $r^2$ | Neur. (34) $r^2$ | Depres. (12) $r^2$ | Cata. (12) $r^2$ | Para. Schiz. (42) $r^2$ |
| Story Words, Nouns, Verbs, Adjectives, Adverbs | .92* | .90* | .97* | .96* | .76* | .97* | .89* |

* Significant at the 1 per cent level of confidence (153).

It is apparent from the data in Table 24 that the Number of Story Words and the Number of Different Words in the four parts of speech categories vary in the same direction 99 times out of 100. It is further apparent, from the size of the squared coefficients ($r^2$), that about 90 per cent of the words in a Story for all groups but depressives is accounted for by the Number of Different Nouns, Different Verbs, Different Adjectives and Different Adverbs. The remaining 10 per cent is composed of other parts of speech and/or repetitions of these four parts of speech (66).

Among depressives, it appears that 75 per cent of the Story Words are accounted for by the Different Nouns, Different Verbs, Different Adjectives and Different Adverbs. The remaining 25 per cent of Story Words are made up of other parts of speech and/or by perseveration of the four parts of speech tested.

The data in Table 25 substantiate the data in Table 24, indicating that language patterns have an internal consistency i.e., as Number of Story Words changes, the numbers of different words in the major parts of speech categories change in the same direction, and conversely. It is also apparent from the data in Table 25 that the different parts of speech covary in the same direction. Thus as the Number of Different Nouns changes, the Number of Different Verbs will change in the same direction and as the Number of Different Adjectives change, the Number of Different Adverbs will change in the same direction, and conversely. These data also indicate that Total Nouns and Different Nouns and Total Verbs and Different Verbs are highly correlated in all groups. However, the different-size coefficients obtained for the different groups indicate that nouns are more likely to be perseverated than verbs and that child samples and paranoid schizophrenic samples tend to repeat nouns more often than other groups tested.

TABLE 25

Correlations Between Language Variables

| Variables | POPULATION SAMPLES | | | | | | |
|---|---|---|---|---|---|---|---|
| | N. Adults (110) $r^2$ | N. Children (106) $r^2$ | Alc. (62) $r^2$ | Neur. (34) $r^2$ | Depres. (12) $r^2$ | Cata. (12) $r^2$ | Para. Schiz. (42) $r^2$ |
| Story Words, Diff. Nouns | .76° | .52° | .92° | .83° | .44° | .80° | .67° |
| Story Words, Diff. Verbs | .69° | .80° | .88° | .82° | .53° | .95° | .86° |
| Diff. Nouns, Tot. Nouns | .91° | .68° | .95° | .94° | .96° | .98° | .69° |
| Diff. Verbs, Tot. Verbs | .95° | .89° | .91° | .92° | .95° | .98° | .93° |
| Diff. Nouns, Diff. Verbs | .43° | .52° | .75° | .68° | .74° | .80° | .17° |
| Adjectives, Adverbs | .46° | .63° | .76° | .54° | .44° | .57° | .19° |

° Significant at the 1 per cent level (153, 67).

The different-size coefficients in Table 25 point up further interesting differences in language patterns of the different sample populations. For example, among paranoid schizophrenics only 19 per cent of change in the Number of Different Adjectives can be explained by a change in the Number of Different Adverbs, and conversely. On the other hand, among alcoholics 76 per cent of change in the Number of Different Adjectives can be explained by a corresponding change in the Number of Different Adverbs, and conversely. These differences in the size of the coefficients suggest that significant differences characterize the language patterns (Parts of Speech Ratio) of different population samples. This inference suggests that Parts of Speech Ratios may be a useful and significant diagnostic and developmental index to personality functions (66).

An effort was made to test this inference by obtaining prediction ratios of the four parts of speech for the different samples. The ratios were derived by determining the degree to which each of the parts of speech in each sample contributed to the Total Story Words. The value of each part of speech was statistically derived by the regression formula (152, p. 778) which provided the ratios listed in Table 26.[1] Each number in the ratios enables us to predict how many words will be added to the Story each time the subject uses the particular part of speech.

TABLE 26

SUMMARY OF MULTIPLE REGRESSION

The regressions take the form: $Y=a_1X_1-a_2X_2-a_3X_3-a_4X_4-b-u$

Where $Y$=Total Words in Story:

$X_1$=Different Adjectives $X_3$=Different Nouns

$X_2$=Different Adverbs $X_4$=Different Verbs

$b$ is a constant term in a regression equation and is derived by the formula: $Y-a_1X_1-a_2X_2-a_3X_3-a_4X_4$

$u$ is the stochistic, residual variable. It is the difference between actual score, in this case the actual number of words, and the estimated number of words. Thus $u$ is the actual error in prediction for each individual; $a$'s are found that make the sum of $u$'s minimal.

ESTIMATED VALUES OF PARAMETERS

| | Diff. Adj. | Diff. Adv. | Diff. N. | Diff. V. | b |
|---|---|---|---|---|---|
| Regression Coef. (153) | $a_1$ | $a_2$ | $a_3$ | $a_4$ | |
| Normal children (53) | 2.825 | 5.187 | 1.659 | 3.317 | −15.044 |
| Alcoholics (31) | 1.357 | 0.999 | 2.622 | 2.247 | −9.394 |
| Neurotics (17) | 2.721 | 2.675 | 1.315 | 1.544 | 7.001 |
| Depressives (6) | 8.947 | 17.525 | −1.533 | −2.317 | 17.901 |
| Catatonics (6) | 7.912 | 3.383 | 0.107 | 3.285 | −7.852 |
| Paranoid schizophrenics (21) | 2.357 | −3.426 | −0.346 | 6.489 | 7.828 |
| Normal adults (55) | 1.964 | 1.387 | 1.995 | 1.791 | −0.488 |

Plus regressions indicate that whenever the part of speech is used, the subject adds many more words to the Story in the form of repetitions or other parts of speech. Minus regressions indicate that as the part of speech is used, the Story tends to be shorter because the subject blocks at that part of speech. This means that certain parts of speech cause the subject to block, so that he consumes more time but does not increase his words correspondingly.

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[1] Dr. Harold Watts of the Cowles Foundation, Yale University, applied the regression formula.

Specifically we might consider the case of the normal adults who have a fairly consistent, equal ratio among the four parts of speech which, rounded off, reads 2:2:2:2. When the normal adult uses a noun, verb, adjective, or adverb, he adds one more word for each of the parts of speech used. In contrast, the depressive with a Parts of Speech Ratio rounded off to 9:18-2:-2 tends to add 8 words after giving an adjective and 17 words after giving an adverb, but he blocks after giving a noun or a verb. Thus after giving a noun or a verb the depressive pauses, consuming much time but reducing the Total Number of Words expected in the amount of time consumed. This discrepancy between Total time and Total Words among depressives is demonstrated in Table 22.

The ratios of the other groups may be explained in like manner. It is thus apparent that each of the sample populations has a unique Parts of Speech Ratio and a unique language pattern which significantly distinguishes normal adults from normal children and each of these from sick populations. Further, each sick sample may be distinguished from each of the other sick samples by use of this language pattern and Parts of Speech Ratio. These findings suggest that the Parts of Speech Ratio is worthy of further testing not only in the 3-DPT, but in other verbal material such as obtained by the Rorschach, the TAT and other projective tests, as well as during interview and other test situations where verbal material is obtained in a fairly structured manner (66).

In summary, the data thus far presented indicate that the 3-DPT is a valid and reliable instrument for measuring functions of personality as reflected in the rate of production, language patterns, especially Parts of Speech Ratios, and manipulation variables. The data indicate that rate of production and language patterns are firmly established patterns of functioning and so are resistive to anxiety-rousing elements of the test situation. The manipulation variables, i.e., the Number of Test Forms Selected and the Number of Test Forms Added are firmly established patterns also and resistive to situational anxiety among normal adults, but they fluctuate under the impact of free-floating anxiety experienced by sick populations. Reaction time variables and the Ratio of Production Words to Story Words are extremely vulnerable to anxiety and as such reflect situational anxiety roused in normal adults by the 3-DPT tasks.

## Norms on Rate, Language and Manipulation Variables in 3-DPT Productions

Norms of performance are generally established by demonstrating that there are no statistical differences between mean scores of random samples from one population. This method of multiple random sampling was not available to the present investigator. Therefore a substitute method was used here to determine the statistical significance of adult means on the behavior variables listed below. In this study the normal adult sample was divided into two smaller samples on the basis of sex, for it was expected that there would be no significant differences between the mean performances of men and women in these behavior variables. The scores obtained by each subject for each variable in the

Prenaming and the Postnaming Productions were counted as separate observations, thus doubling the observations by providing 50 observations of the male sample and 60 observations of the female sample.

The data indicate that there are no statistically significant mean differences between the male and female samples for the variables tested except for the Number of Test Forms Selected. For this variable, the mean difference between men and women appears to be significant at the 5 per cent level of confidence. Apparently normal men tend to select one or two more test forms in a Production than do normal women. Since all but this one of the tested means were not statistically different, it was reasonable to consider the male and female samples as random samples of one population and as such to combine and treat them as one population for the purpose of establishing adult norms for the 3-DPT.

TABLE 27
MEAN NUMBER OF TEST FORMS USED

| Samples No. | Prenaming | | Postnaming | | Combined Pre- & Postnaming | |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD |
| N. adults (55) | 6.8° | 5. | 7.2° | 8. | 7. ° | 7. |
| Children (92) | 6.8° | 7.5 | 4.7°°° | 7. | 5.7° | 7.5 |
| Alc. (31) | 10.9°° | 11.5 | 9.7°°° | 11.5 | 10.3°° | 12. |
| Neur. (17) | 8.4°°° | 6.5 | 8. ° | 12.5 | 8.2°°° | 11. |
| Depres. (6) | 7.9°°° | 7.5 | 4.2°°° | 8. | 6. °°° | 8. |
| Cata. (6) | 7.9°°° | 9. | 11.5°° | 15. | 9.7°° | 12.5 |
| Para. schiz. (21) | 12.6°° | 15.5 | 11.3°° | 15.5 | 12. °° | 15.5 |
| Psychotic [1] (33) | 10.9°° | 14. | 10. °° | 14.5 | 10.4°° | 14.5 |
| Hospital [2] (50) | 10. °° | 12.5 | 9.4°°° | 14. | 9.7°° | 13.5 |
| Total S.[3] (81) | 10.4°° | 12.5 | 9.5°°° | 13.5 | 9.9°° | 13. |

° No significance.
°° Significance at the 1 per cent level of confidence.
°°° Significance at the 5 per cent level of confidence.
[1] Depressives, catatonics, and paranoid schizophrenics.
[2] Neurotics and psychotics.
[3] Alcoholics plus hospitalized samples.

## SIGNIFICANCE OF MEAN DIFFERENCES BETWEEN NORMAL CHILDREN AGED 9 TO 13 YEARS AND NORMAL ADULTS

Children are expected to differ from normal adults in these personality variables due to maturational factors. The data indicate that child and normal adult samples do differ significantly from each other at the 1 per cent level of confidence in all the language variables tested. Thus children use many more words both in the Productions and in the Stories than do normal adults. Adults use on the average 75 words in a Production and 55 words in a Story, while children use 145 words in a Production and 140 words in a Story. The data further indicate that children use significantly fewer gratuitous words than do normal adults, giving an average of 5 words between Production and Story while adults give an average of 20 words between Production and Story. Furthermore, just as children use more total words they also use significantly more nouns, verbs, adjectives and adverbs. Further significant differences between children and normal adults are apparent in the Number of Test Forms Selected, the Verbal Reaction Time (VRT) and the Total Time (TT) consumed for a Production. Children appear to select 4 test forms while adults tend to select 5 test forms; children tend to react verbally within 6-10 seconds while adults react verbally within 2-5 seconds; children appear to take 5 minutes for a production while adults take 4 minutes for a production. On the other hand there seems to be very little difference between children and adults in the Gesture Reaction Time (GRT) and in the Number of Test Forms Added. The lack of statistical difference between children and adults in the Number of Test Forms Added is surprising in view of our expectation that this variable is an immaturity index and thus would be more popular in children's performances than in adult performance. In spite of these results clinical experience still points to this behavior variable as an index of immaturity reflecting impulsive and inadequately planned behavior.

In an effort to tease out the factors that seemed to blur the significance of this variable, the mean scores on Number of Test Forms Added for both adults and children were calculated separately for the Prenaming and the Postnaming Productions and compared statistically.

The data indicate that, in this variable, normal adults differ significantly from Prenaming to Postnaming Production while children are consistent. Furthermore, there is a statistically significant difference between children and adults in the Number of Test Forms Added in each of the 3-DPT Productions. In the Prenaming Production, adults appear to add less than one test form while children add close to 2 test forms. In the Postnaming Production, adults show a drastic change in behavior. Here the adults add three test forms in contrast to less than one added in the Prenaming Production. The children, on the other hand, remain stable in the Number of Test Forms Added, adding close to two test forms in each Production.

The change in behavior among the adults suggests that adults tend to become less cautious in the Postnaming task than they were in the Prenaming task. The constancy of this behavior among children suggests that this variable reflects impulsive behavior common to children aged 9 to 13 years and, as such, serves as an immaturity index.

In an effort to determine whether the variable, Number of Test Forms Added, was common to all children, 42 records were examined for this variable, whether it appeared in the Prenaming task, the Postnaming task, or both. The sorting provided 24 records with Test Forms Added and 18 records without Test Forms Added. For these two groups the mean numbers of Test Forms Selected, Added and Used in the Prenaming and Postnaming Productions were computed separately and compared for statistical differences.

The data indicate, first of all, the consistency of the two groups of children from Prenaming to Postnaming Production in the Number of Test Forms Selected, Added and Used. Thus children who are adders appear to select 4 to 5 test forms, add 4 to 5 test forms and use 8 to 9 test forms in each Production. On the other hand, children who do not add test forms appear to select 3 to 4 test forms, but they do not add any test forms so that, in all, they use 3 to 4 test forms for each Production. These two groups of children appear to be significantly different on the basis of the variables, Number of Test Forms Added and Number of Test Forms Used and not statistically different in Number of Test Forms Selected. However, the adders tend to select 1 to 2 more test forms than do the non-adders. The significant differences between these two groups of children in these manipulation variables suggest that these variables distinguish the cautious from the impulsive and/or spontaneous children. These differences further suggest that the particular manipulation approaches reflect characteristic adjustive behavior rather than situational reactions. Further study of adders and nonadders in the 3-DPT might provide some worthwhile insights into differences in maturation patterns of personality. A similar analysis of adult behavior in terms of these manipulation variables might also prove very fruitful in terms of differences in adjustment patterns among normal adults.

In summary, normal adult men and women do not differ significantly in rate, language and manipulation variables except in the Number of Test Forms Selected. Therefore the data for the men and women were pooled and treated as one population for the purpose of establishing norms.

Child samples aged 9 to 13 years differ significantly from normal adult samples in all language variables, the Number of Test Forms Selected, Verbal Reaction Time (VRT) and Total Time (TT). The children appear indistinguishable from normal adults in Gesture Reaction Time (GRT) and in Number of Test Forms Added when the Prenaming and the Postnaming Productions are combined. However, children can be significantly distinguished from normal adults in Number of Test Forms Added when the mean performances are compared separately for the Prenaming and Postnaming Productions.

These findings indicate that the rate, language and manipulation variables, as defined in this study, are sensitive to maturational influences.

# Chapter IV

# Diagnostic Significance of 3-DPT Variables and Clinical Implications

## LANGUAGE, RATE AND MANIPULATION VARIABLES

In this section, each variable will be tested for its diagnostic value as determined by the statistical significance of the difference between normal adult mean performance and mean performance of each of the other samples tested. For each variable, the mean performance of each sample population in the Prenaming, the Postnaming and the combined performances will be presented and compared statistically to the corresponding means of the normal adult sample. If these variables have diagnostic significance, then the validity of the 3-DPT as an instrument for measuring personality functions will have been established. The sample populations used here will serve as the outside criteria of validity since they are taken from demonstrably different populations. The normality of the normal adult sample was based on the criterion of productive occupational and/or educational and social activities in the free milieu of the home and the community. The healthy adjustment of the child sample was based on a similar criterion, i.e., productive functioning in school, home, and community. The criterion of alcoholism was voluntary admission of compulsive drinking leading to a search for psychotherapeutic help. The criterion of mental and emotional illness was confinement in a private mental hospital, while the criteria of neurosis and the various psychoses were the combined judgments of the hospital psychiatric and psychological staff.

### NUMBER OF STORIES GIVEN

It will be recalled that the directions for the Productions require that the subject tell one Story, using the test forms he selects in his Story. To fulfill these requirements, the subject must be able to attend to the directions when given, without being unduly distracted by ideas and feelings roused by the test forms or by other stimuli in the test situation. In other words, he must be able to select series of units out of a complex, unstructured situation and he must be able to relate these units verbally in a goal-directed theme.

Clinical experience with the 3-DPT indicated that subjects differed in their responses to these directions. It was observed that some subjects followed the directions explicitly, i.e., selected some test forms, placed them on the second table, and then told a Story uniting the selected test forms in a goal-directed manner. Other subjects verbally identified the test forms as they selected them and placed them on the second table, and then told a Story involving the selected test forms. Still other subjects named and/or described the test forms as they selected them and placed them on the second table. However, they did not go on with a Story. When the directions were repeated to see if they could grasp the request for a Story, these subjects simply repeated the naming and/or description of the test forms as evidence of fulfillment of directions. These subjects appeared to be unable to relate objects conceptually and to be unaware of this disability. Other subjects named and/or described test forms while protesting anxiously that they could not give a Story. These subjects also appeared unable to relate objects conceptually, but, in contrast to the ones above, were apparently aware of their disability and were anxious about it. Still others named and/or described test forms or they built Stories around discrete test forms rather than organize the selected test forms into one Story. When directions were repeated for these subjects, they insisted defiantly that they gave a Story, a few proudly and disdainfully claiming that they gave more than one story, as though to say they gave more than was expected of them. These subjects apparently had difficulty relating objects conceptually, but were either unaware of this disability or too frightened of this disability to admit it. These different patterns of response to the Production directions provided the variable, Number of Stories Given.

Number of Stories Given refers to the subject's conception of his own performance, of his ability to fulfill the directions. This variable does not represent an objective measure of the number of stories given. In other words, it is determined by the subject's claim about his performance rather than by objective standards of language or literature.

Since one Story was the expected response to the directions, chi square tests were made of the differences between normal adult and other samples on the basis of the number of subjects giving one Story as against the number of subjects in each sample giving no Story or more than one Story. The differences in the Prenaming, Postnaming and combined Productions were tested to see whether the differences, if significant, were consistent before and after the Naming Task, or whether the samples changed in this behavior variable from Prenaming to Postnaming performance.

The data indicate that the normal adult sample differs significantly from the hospitalized psychotic samples in the

Prenaming performance, with the depressives and catatonics varying in the direction of no Story and the paranoid schizophrenics varying in the direction of more than one Story. The differences between the normal adults and these three samples appear to be significant at better than the 1 per cent level of confidence. On the other hand, the children, the alcoholics and the neurotics do not appear to differ significantly from normal adults, each obtaining a mean of one Story in the Prenaming Production. However, the data suggest that the children and the neurotics tend to protest disability more often than do normal adults. In the Postnaming Production, neurotics, depressives and catatonics appear to be significantly different from the normal adults, all samples varying from the normal sample in the direction of no Story. The paranoid schizophrenic sample appears to recover in the Postnaming Production, giving, on the average, one Story. Although the children do not differ significantly from the normal adults on the Postnaming Production, they tend to protest disability in the Postnaming Production even more strongly than in the Prenaming Production. Alcoholics appear to maintain an average of one Story in both productions.

When the data on the Prenaming and the Postnaming Productions are combined, the differences between the normal adult sample and the other samples appear to be consistently significant. The normal adults differ from children and paranoid schizophrenics at the 5 per cent level of confidence, with children varying in the direction of no Story and paranoid schizophrenics in the direction of more than one Story. Normal adults appear significantly different from the hospitalized neurotics, depressives and catatonics at better than the 1 per cent level of confidence, with all three samples varying from the normal in the direction of no Story. Alcoholics consistently matched normal adults in this variable.

Since the Number of Stories Given represents the subject's claim about his performance, the data presented may be interpreted as follows: Normal adults generally claim to have given one Story in both the Prenaming and the Postnaming Productions, with a few claiming inability to give a Story for the Prenaming Production, none claiming this disability for the Postnaming Production, and very few claiming more than one Story for either. Children, on the average, tend to claim one Story, but they claim inability to give a Story significantly more often than do normal adults. Alcoholics appear to claim one Story for each Production quite consistently, with only a very few claiming two stories. No alcoholic in this study claimed inability to give a Story. It should be noted that all subjects who claimed disability were urged to try by repetition of directions. Only when they persisted in their claim after 3 repetitions, were they credited with this disability. Alcoholics often claimed disability but they came through after directions were repeated several times. Neurotics tend to claim one Story in the Prenaming Production. In the Postnaming Production, the neurotics protest inability to give a Story significantly more often than do normal adults. Depressives tend to protest inability to give a Story both in the Prenaming and the Postnaming Productions, expressing greater inability in the Postnaming Production. Catatonics claim inability to give a Story significantly more often than do normal adults. Paranoid schizophrenics are highly distinguishable by their tendency to claim more than one Story in the Prenaming Production and one Story in the Postnaming Production. Paranoid schizophrenics appear to "catch on" to the requirements when the directions to the Postnaming Production are given.

In summary, it appears that the variable, Number of Stories Given, as defined here, significantly distinguishes normal adults from normal children and from hospitalized neurotics, paranoid schizophrenics, catatonics and involutional depressives. It does not differentiate normal adults from ambulatory alcoholics.

### WORDS IN PRODUCTION

Statistical analysis of the data indicates that the Number of Words in the Production significantly differentiates normal adults from normal children, alcoholics, and hospitalized neurotics and psychotics.

Normal adults appear to give, on the average, 75 words in a 3-DPT Production, while children aged 9 to 13 years and sick subjects give more than 100 words in a Production. These findings suggest that excessive verbalization in adult Productions reflects a certain degree of immaturity and/or some form of emotional disturbance. It is interesting to note that catatonics do not differ significantly different from normal adults in the Number of Words in the Prenaming Production, but differ significantly in the Number of Words in the Postnaming and combined Production means. Normal adults appear to use less Total Words in the Postnaming Production than in the Prenaming Production, while catatonics appear to verbalize as much or more in the Postnaming as in the Prenaming Production.

The data further indicate that the language variable, Number of Words in 3-DPT Stories, significantly differentiates normal adults from children and normal adults from alcoholics and hospitalized subjects, except for depressives and catatonics. Normal adults give on the average less than 60 words in each 3-DPT Story, while children and sick subjects give more than 60 words in each 3-DPT Story. In fact, except for the depressives and catatonics, sick subjects and children give on the average more than 80 words in each 3-DPT Story.

The Ratio of Production to Story Words in the 3-DPT was viewed as an index to situational anxiety as indicated earlier. Mean Ratios of Production to Story Words of normal adults and other population samples were expected to differ significantly due to differences in degree of situational anxiety experienced during the 3-DPT tasks.

As measured by this ratio, children manifest significantly less situational anxiety in 3-DPT tasks than normal adults. Catatonics also appear to give significantly fewer gratuitous words and so appear to manifest less situational anxiety. Alcoholics do not appear to differ significantly from normal adults in degree of situational anxiety, while hospitalized neurotics, depressives and paranoid schizophrenics appear to have significantly more situational anxiety. These data suggest that alcoholics disclose a "normal" amount of situational anxiety in the 3-DPT productions while neurotics, depressives and paranoid schizophrenics disclose significantly more than a "normal" amount of situational anxiety. It is important to note, however, that in all samples tested, the Ratio of Production Words to Story Words decreased radically from the Prenaming Production to the Postnaming Production. The consistent decrease in this ratio in all samples suggests that situational anxiety in all groups, as measured by this variable, is reduced by the time the subjects reach the Postnaming Production.

The Mean Number of Different Words in the four major parts of speech categories, namely the Different Nouns, Different Verbs, Different Adjectives, and Different Adverbs, significantly differentiate normal adults from normal children and from sick samples, except for the depressives and the catatonics. It is noteworthy, however, that both the depressives and the catatonics tend to use more verbs in the combined Productions than do the normal adults.

Statistical analysis of the time variables indicates that normal adults may be significantly differentiated from sick subjects by a shorter Reaction Time both on the gesture and verbal levels and by a shorter Total Time per Production. Children appear to react as fast as normal adults on the gesture level (GRT) but they take significantly longer on the verbal level (VRT). On Total Time (TT) children do not differ significantly from normal adults although they tend to take somewhat more time to complete a Prenaming Production.

The data indicate further that normal adults react with gestures and words significantly faster than do children and sick subjects in the Postnaming Productions. In addition, normal adults take significantly less Total Time for a Postnaming Production than do children and sick subjects. It is noteworthy that children slow up on all three time measures in the Postnaming Production, so that their performance may be distinguished from that of the normal adults on the Postnaming Production but not on the Prenaming Production. It is also worth noting that catatonics change significantly from Prenaming to Postnaming Productions, but their change is the reverse of the change seen in children. The catatonics seem to react very slowly with gesture in the Prenaming Production, but in the Postnaming Production they seem to react impulsively on the gesture level.

In the Postnaming Production, as in the Prenaming Production, normal adults appear to react, both on the gesture and the verbal levels, within 3 seconds and to consume no more than 4 minutes for each production.

The data further indicate, generally, that normal adults have a shorter mean GRT, VRT and TT than children and sick subjects in the combined Prenaming and Postnaming Productions. Normal adults, on the average, are consistent from Prenaming to Postnaming Production in these time variables. They react, both on the gesture and verbal levels, within 3 seconds, and they finish their Productions within 4 minutes. Normal children appear to be rather variable from Prenaming to Postnaming on the GRT and VRT, but they consistently complete their Productions within 5 minutes. All sick groups appear to consume 6 or more minutes per Production.

The variable, Number of Test Forms Selected, throughout the 3-DPT Productions, does not differentiate normal adults from sick samples although it does serve to distinguish normal children from normal adults in the Prenaming and combined Productions.

Since this behavior variable does distinguish the performance of normal men from normal women at the 5 per cent level of confidence, it is likely that it reflects characteristic sex differences in adults. Therefore, its diagnostic value is blurred in these data which treat men and women as one population. Further study of this variable, from the point of view of sex differences, may prove very profitable.

In contrast to the lack of discriminatory power of the variable, Number of Test Forms Seelcted, is the significant discriminatory power of the variable, Number of Test Forms Added.

The variable, Number of Test Forms Added, significantly distinguishes normal adults from children and from sick samples. It is noteworthy, however, that hospitalized neurotics do not differ significantly from normal adults in this variable. Also, depressives are distinguishable by their consistency in the few test forms added in each Production, in contrast to the normal adults who add significantly more test forms in the Postnaming Production than in the Prenaming Production. Depressives also stand out by their homogeneity, as evidenced by their standard deviations.

The data relative to Number of Test Forms Selected and Number of Test Forms Added suggested that the Total Number of Test Forms Used would be even more highly discriminating than Number of Test Forms Added. Accordingly, these two variables were combined to form the variable, Number of Test Forms Used. Mean scores and standard deviations were calculated, and are presented in Table 28.

TABLE 28
STATISTICAL SIGNIFICANCE OF DIFFERENCES ON EACH ITEM OF THE VARIABLE LITERARY STYLES

| Literary Styles | N. Adults (55) | Children (86) | N. Adults (55) | Alc. (31) | N. Adults (55) | Neur. (17) | N. Adults (55) | Psych. (33) |
|---|---|---|---|---|---|---|---|---|
| Naming* | | — | | — | | — | | $p < .01$ |
| Exposition | | — | | $p > .05$ | | $p < .05$ | | $p < .02$ |
| Free Ass'n. | | — | | — | | $p < .01$ | | $p < .01$ |
| Description | | — | | — | | — | | — |
| Drama | | $p < .01$ | | — | | — | | — |

[*] Since Naming was given by a few children and a few alcoholics in the context of a 3-DPT Story, and since Naming was expected to occur only in psychotic samples, the differences between the child sample and the psychotic sample and between the alcoholic sample and the psychotic sample were tested for significance. Chi square tests of significance disclosed that the child sample and the alcoholic sample differed from the psychotic sample at the 1 per cent level of confidence on the incidence of Naming in the context of the 3-DPT Stories. These findings support our hypothesis that the use of Naming in the context of the 3-DPT Story is a very malignant indicator.

The data in Table 28 confirm our expectations that the total Number of Test Forms Used is a more highly discriminating variable between normal adults and sick groups than Number of Test Forms Added. However, Number of Test Forms Used does not distinguish normal adults from children except in the Postnaming Production where children tend to use 2 less test forms than do adults. On the average, normal adults and children use from 5 to 7 test forms in each Production, while sick groups (except depressives) tend to use more than 7 test forms in each Production. Depressives are distinguishable, however, by the significant difference between the Number of Test Forms Used in the Prenaming and the Postnaming Productions, changing from 8 test forms used in the Prenaming Production to 4 test forms used in the Postnaming Production.

In summary, the mean Number of Words in the Production significantly differentiates normal adults from all sick subjects. The mean Number of Words in the Story is a discriminating variable also, distinguishing normal adults from children and from alcoholics, neurotics and paranoid schizophrenics. However, the mean Number of Words in the Story does not distinguish depressives and catatonics from normal adults. The mean Production to Story-Word Ratio distinguishes normal adults from all groups except ambulatory alcoholics. The mean Number of Different Nouns, Different Verbs, Different Adjectives and Different Adverbs, like the mean Number of Words in the Story, distinguish normal adults from all groups but depressives and catatonics.

The Rate of Production variables, i.e., GRT, VRT and TT, significantly differentiates normal adults from all sick samples.

The mean Number of Test Forms Selected does not differentiate normal adults from sick samples. The significance of this variable may better be demonstrated when tested samples are controlled on sex composition. The mean Number of Test Forms Added distinguishes all sick samples but the neurotics from normal adults. The sum of these two manipulation variables, namely the Number of Test Forms Used, appears to be even more discriminating than the Number of Test Forms Added in that it significantly distinguishes normal adults from all sick samples. The mean Number of Test Forms Added distinguishes children from normal adults.

### VERB TENSE

As defined earlier, verb tense is an index to time perspective. It reflects a subject's awareness of the relationships of events as they occur in time. A mature sense of time requires the ability to make use of past experience in meeting present situations and, from the past and the present, anticipate future plans and actions.

Studies on verb tense usage in stories on the Michigan Picture Test (150, pp. 40-41) indicated that: "emphasis on the present tense in these stories is an indication of good adjustment" in children of grades three through nine. However, on "Picture 12, the blank card . . . the percentage of past tense references increases markedly at all grade levels. Possibly the blank card is threatening enough to cause children to use past tense as a mechanism for handling conflict produced when they are forced to tell a story with no structure to afford a crutch."

The evidence that well-adjusted children use the present tense in structured situations but tend to make greater use of the past tense in unstructured situations has implications for our study. These findings suggest that children may be expected to make greater use of past tense in the Stories of the 3-DPT in view of the multiplicity and ambiguity of the test forms as well as the lack of background structuring in the Story tasks.

Clinical experience with the 3-DPT suggests that children make freer use of the past tense than of the present tense in the 3-DPT Stories. Experience also suggests that normal adults use the present tense more often than other tenses, possibly because normal adults are better able to meet unstructured problem situations than are children. Sick adults appear to make free use of multiple verb tenses in one Story and use not only the present and past but also the future, conditional and imperative verb tenses. The conditional and imperative tenses are descriptive and may refer to the present, past or future. However, these two verb tenses have special significance in terms of adjustment and so are treated as different from the present, past and future tenses. Conditional tenses, as indicated earlier appear to reflect ambivalence and conflict, while the imperative appears to reflect dependency on authority.

All Stories in the 3-DPT were analyzed in terms of the following verb tenses: present, past, future, imperative, present and past conditional. Stories that contained multiple verb tenses in illogical sequence were scored as illogical as well as credited with the particular verb tenses used.

It was expected that normal adults would differ significantly from the other samples, both the children and the sick subjects, in the degree to which each group used the various verb tenses in the 3-DPT Stories. Normal adults were expected to use the present, past and future, in that order, while children were expected to use the past and the present, in that order, but were expected to make little use of the future. Sick subjects were expected to make free use of the conditional and the imperative in addition to the past, future and the present tenses.

To test the hypothesis that normal adults differ significantly from children and from the sick samples in the use of verb tenses, the data were submitted to chi square tests of significance.

The data support the hypothesis that verb tense usage differs significantly at better than the 2 per cent level of confidence between normal adults and children. This finding strongly suggests that verb tense usage is an index to maturity. However, the data do not differentiate normal adults from alcoholics and neurotics, while the difference between the normal adults and the psychotics falls somewhat short of statistical significance. The lack of statistical significance in verb tense usage between normals and sick subjects casts some doubt on the hypothesis that verb tense usage is an index to adjustment (150, p. 90). However, since clinical experience with the 3-DPT strongly suggests that there are real differences in verb tense usage between normal adults and sick subjects, an effort was made to tease out the differences between normal adult and sick samples by a variety of approaches. The data were compared on the per cent of each sample using each verb tense, the per cent of each sample using the various unique verb tense patterns, and the per cent of each sample using one or multiple verb tenses in one Story.

It was found that children differ from normal adults by an inverse relationship between the present and the past tenses. Thus normal adults make far more use of the present tense than of the past tense, while children make far more use of the past tense than of the present tense in the 3-DPT Stories.

The finding that children between the ages of 9 and 14 use the past tense in the 3-DPT Stories more often than the present supports the findings of the Michigan study (150) which reports that well-adjusted children between the ages of 8 and 14, tested with the Michigan Picture Story Tests, used the past tense significantly more often than the present in stories elicited by unstructured test material. These findings suggest that test situations with nonstructured backgrounds and object relationships penetrate the defenses of subjects tested more effectively than do test situations with structured backgrounds and object relationships. All sick samples appear to use the present tense more often than the past tense, much like normal adults, but the sick samples make more use of all other verb tenses than do normal adults.

The data did not support the expectation that normal adults would use the present, past and future in that order. Instead, it appears that normal adults use the present most frequently, the past next in frequency, as was expected, but they use the conditional tense more often than they use the future tense. The data indicate that the future and the imperative tenses are rarely used by normal adults in the 3-DPT Stories. The sick samples, except for the depressives, appear to use the verb tenses in much the same rank order as do the normal adults, but it is noteworthy that the sick samples use many more verb tenses of all kinds in one Story than do normal adults.

It appears, also, that the neurotics and the depressives make free use of the conditional verb tense, suggesting that both samples experience a good deal of ambivalence and conflict about action. The depressives appear to be especially different from the other samples in the respect that they use many more verb tenses per Story than do any of the other samples; they use the conditional as often as the present tense, and the past almost as often as the present. Also, their verb tense sequence is often illogical, reflecting confusion in time perspective. The catatonics appear to ignore the future altogether, and the paranoid schizophrenics appear to ignore the imperative and often give illogical verb tense sequence.

Analysis of verb tense patterns indicates that normal adults differ from children and from sick samples in verb tense patterns. Normal adults appear to limit themselves to one verb tense in a Story, occasionally using two tenses but rarely if ever using three or more verb tenses in a Story. Children, alcoholics and paranoid schizophrenics appear to use two verb tenses about as often as they use one verb tense and they make fairly free use of three and even four verb tenses in one story. Neurotics appear to use two verb tenses much more often than they use one verb tense in a Story, but they seldom if ever use more than two verb tenses in one Story. Depressives appear to use multiple verb tenses consistently, rarely using only one verb tense, while the catatonics do just the reverse; they appear to use one verb tense exclusively, rarely using more than one verb tense in a Story.

The analysis also revealed that 75 per cent of the normal adults use one verb tense in a 3-DPT Story and 24 per cent use two verb tenses in one 3-DPT Story. The use of three or more verb tenses in one Story of the 3-DPT is rare among normal adults. The data also suggest that children, alcoholics and paranoid schizophrenics are rather similar in terms of the number of verb tenses used in one 3-DPT Story. Thus about half of each of these three groups use one verb tense in one Story, about one third of the groups use two verb tenses in one Story, and the rest use three or more verb tenses in one Story. Neurotics appear to make greater use of two verb tenses than of one verb tense in one 3-DPT Story, with 59 per cent using two verb tenses and only 24 per cent using one verb tense. This pattern is just the reverse of the normal adult pattern. Neurotics also appear to make some use of three verb tenses in one 3-DPT Story. Depressives appear to use multiple verb tenses consistently, with as many depressives using two as three or more verb tenses in one Story. In contrast to the depressives, the catatonics appear to use one verb tense almost exclusively.

In summary, normal adults differ significantly from children in verb tense usage in 3-DPT Stories, with normal adults using the present tense far more often than the past tense while children use the past tense far more often than the present tense. Children appear to make frequent use of the conditional and the imperative verb tenses. The future tense appears to be rarely used by all groups. Normal adults appear to limit themselves to the use of one or at most two verb tenses in one 3-DPT Story, while children and sick samples (except the catatonics) use multiple verb tenses in one Story as often as they use one verb tense in one Story. Depressives appear to use multiple verb tenses consistently, while catatonics seldom use more than one verb tense in a 3-DPT Story. Neurotics appear to use the conditional verb tense almost as often as they use the past tense, while the depressives use the conditional verb tense more often than they use the past tense and as often as they use the present tense. In fact, it appears that depressives always use the conditional when they use the present. Depressives and paranoid schizophrenics are more apt to offer verb tenses in illogical sequence than are the other sick samples.

## TIME PERSPECTIVE

Time Perspective as a variable of behavior appears to have special significance in the 3-DPT. The directions, the test forms and the standard arrangement of the test forms do not give any cues to historical time settings, yet most tested subjects introduce evidence that suggests that the events of their Stories occured at specific times in the history of the world. Time Perspectives such as: the twentieth century, early or middle, the eighteenth century, the nineteenth century, ancient times, during the Roman Empire, medieval times, during the crusades, prehistoric, biblical or mythical times and other such indicators, either specifically stated or represented by symbols of the periods, were given by tested subjects as they developed the events of their Stories. In view of the prevalence of these Time Perspectives in 3-DPT Productions, it seemed worthwhile to examine the incidence of these different periods of history in the different samples and to test the significance of the differences in the use of Time Perspectives between the normal adult sample and the other samples.

A view on Time Perspective was expressed by Moreno (154) in 1946: "Infantile time has but one dimension – the present." Eliasoph (57, pp. 308-309) supports this view in his observation: "The time perspective of the orally dependent individual is often distorted so that he operates with little awareness of the past and a hazy perspective of the future, thus he functions pretty much in the present." These views suggest that infantile sample populations would be distinguished from mature sample populations on the basis of the use of the present Time Perspective.

Clinical experience with the 3-DPT suggests that normal adults tend to make free use of present time and little use of other historical periods. Children appear to make free use of mythical, ancient and present time, singly or in combination. Sick subjects appear to use many different time perspectives in a variety of combinations in one Story. The use of the present period in history suggests concern with ongoing day-to-day problems; the use of mythical time suggests concern with fantasy. Ancient time suggests concern with early childhood experiences; prehistoric time suggests concern with infantile needs; biblical and eternal time appear to reflect denial of reality with grandiose strivings.

Examination of the test protocols provided the following time perspectives:

0 Vague, i.e., no indicators.
1 Early twentieth century, i.e., from 1900 to 1914.
2 Middle twentieth century, i.e., from 1914, World War I, to the present.
3 Eighteenth or nineteenth century, e.g., early American history; French Revolution.
4 Medieval time, e.g., the crusades.
5 Ancient times, e.g., Roman, Greek, Etruscan history.
6 Biblical time, e.g., Adam and Eve, Moses, Jesus.
7 Prehistoric time, e.g., cave dwellers, cavemen, stone implements dinosaurs.
8 Eternal time, e.g., through the ages, God's universe.
9 Mythological time, e.g., witches, giants, satyrs, moonmen, superman.

To test the hypothesis that normal adult samples differ from child samples and from sick samples in the use of Time Perspectives, the data were submitted to chi square tests of significance. The Time Perspective items were combined as follows for the tests of significance:

0 Vague
1, 2 Early and middle twentieth century, representing the present.
3, 4, 5 Ancient, medieval, eighteenth and nineteenth centuries representing the past.
6, 8 Biblical and eternal, representing denial of reality and

grandiose strivings.
7, 9 Prehistoric and mythical, representing fantasy striving for infantile gratifications.

Analysis of the data indicates that normal adult samples differ from child samples in the use of Time Perspectives at better than the 10 per cent level of confidence. Since the 5 per cent level of confidence is generally considered necessary to indicate statistical significance, these findings may be viewed only as a trend; however the trend appears strong. The data indicate further that alcoholics differ from normal adults at the 5 per cent level of confidence, i.e., in more than 95 times out of 100, alcoholics can be distinguished from normal adults in terms of the Time Perspectives used in the 3-DPT Stories. It is noteworthy, however, that the hospitalized neurotics and psychotics were not demonstrably different from normal adults by this test of significance.

The failure of this test of significance to differentiate the normal adults from the hospitalized samples is puzzling, since clinical experience indicates that hospitalized samples use a large variety of Time Perspectives as well as multiple Time Perspectives in one Story. In an effort to tease out the differences between normal adult samples and hospitalized samples in this variable, the data were examined both in terms of per cent of each sample using each of the Time Perspectives and per cent of each sample using the different Time Perspective patterns. It was found that children and alcoholics make significantly less use of present time indicators and more use of vague time indicators than do normal adults. Children appear to make free use of mythical and/or prehistoric time while alcoholics appear to make free use of past time settings. The neurotics appear to use present time indicators as often as do normal adults, but they are more likely to be vague about time indicators and they appear to make freer use of mythological and/or prehistoric time indicators. The psychotic group appears to make as much use of present Time Perspectives as the normal adult group and to be vague about Time Perspective as often as the normal adult group. However, the psychotics appear to make much freer use of past, biblical, mythical and/or prehistoric Time Perspective cues than do normal adults. The difference between normal adults and psychotics is especially apparent when the per cents for each sample are totaled. Examination of the total per cents of each sample using Time Perspectives reflects an interesting trend. Normal adults appear to use one Time Perspective per Story quite generally; children appear to make somewhat freer use of multiple Time Perspectives in each Story than do normal adults, but they seem to use multiple Time Perspectives less often than do alcoholics and neurotics. Alcoholics and neurotics appear to use multiple Time Perspectives more often than normal adults and children but much less often than hospitalized psychotics. These data suggest that the use of multiple Time Perspectives in one Story is an index of maladjustment and, further, the more Time Perspectives used in one Story, the more severe is the maladjustment.

Another view of the differences in the use of Time Perspectives between normal adults, children and sick samples may be seen in the comparison of Time Perspective patterns used by each sample. Time Perspective patterns reflect the number and the type of the Time Perspectives used.

Analysis of these patterns indicates that 74 per cent of the normal adults use one Time Perspective only in a Story; 16 per cent give no Time Perspective indicators; 10 per cent use two Time Perspectives in one Story; and only 20 per cent use three Time Perspectives in one Story, namely present, past and prehistoric. These data further indicate that normal adults do not make much use of early twentieth century time, eighteenth or nineteenth centuries, or medieval period. Biblical, eternal and mythical are rare among normal adults.

Among children, 65 per cent use one Time Perspective in a Story, 27 per cent don't give Time Perspective indicators and 16 per cent use two Time Perspectives in one Story. Children appear to make free use of present and mythical times but they appear to make little or no use of the early twentieth century, the medieval period, ancient times, prehistoric time and eternal time.

Alcoholics are as likely to be vague about Time Perspective as they are to use the present Time Perspective. Among alcoholics, 41 per cent use one Time Perspective in one Story, 17 per cent use two Time Perspectives in one Story and 9 per cent use three or more Time Perspectives in one Story. Alcoholics appear to use predominantly the present, ancient, and prehistoric Time Perspectives, but they make little or no use of the early twentieth century, the eighteenth or nineteenth centuries, biblical, eternal or mythical Time Perspectives. The limited use of mythical Time Perspective by alcoholics is surprising in view of the clinical evidence that alcoholics entertain extensive fantasy lives. Their fantasies are perhaps expressed in the use of prehistoric Time Perspective rather than in the use of mythical Time Perspective. Twenty-two per cent of the alcoholics use prehistoric Time Perspective.

Among hospitalized neurotics, 54 per cent appear to use one Time Perspective in one Story, 22 per cent tend to use two Time Perspectives in one Story, and 6 per cent use three Time Perspectives in one Story. Twenty-three per cent of the neurotics tend to be vague about the Time

Perspective in 3-DPT Stories. Neurotics appear to make free use of the present time, both early twentieth and middle twentieth century. The tendency to specify the particular part of the century is unique to the neurotics. Neurotics are unique also in that they do not make any use of ancient, medieval or prehistoric Time Perspectives.

Among hospitalized psychotics, 65 per cent use one Time Perspective in one Story, 18 per cent give no indicators of Time Perspective, while 20 per cent use two to four Time Perspectives in one Story. The tendency of the psychotics to use as many as four Time Perspectives in a variety of combinations distinguishes the psychotics, as a group, from the other samples. Psychotics appear to use all listed Time Perspectives in combinations that are obviously illogical and as such reflect confusion in Time Perspective.

In summary, it appears from the data presented that normal adults differ from children and alcoholics in terms of the frequency of different Time Perspectives used in 3-DPT Stories. Normal adults make significantly more use of present time than do children and alcoholics. Children and alcoholics are more likely to be vague about Time Perspective in a 3-DPT Story than are normal adults. Children make freer use of mythological time than normal adults, and alcoholics make freer use of prehistoric time than normal adults. Neurotics appear unique in that they make specific reference to particular periods within a time span such as: "early 20th century," "First World War," etc. The neurotics appear unique also in the fact that they make no use of ancient, medieval or prehistoric time. Psychotics appear unique in the respect that they make free use of all the listed Time Perspectives, combining as many as four Time Perspectives in one story, the combinations being generally illogical.

### LITERARY STYLE

Literary Styles used in 3-DPT Stories are classified as follows: Naming, Exposition, Free Association, Description and/or Drama. The expected normal adult Story pattern would include Description and Drama or simply Description, but rarely just Drama.

Description reflects sensitivity to abstract and/or concrete aspects of objects and/or object relationships. Description thus operates to delay action for ideation in much the same way that Design in the 3-DPT story delays action for ideation. Drama reflects a drive to action leading to goal attainment, either real or fantasied. Thus Drama is similar in intent to the movement of test forms during the development of a 3-DPT Story. The drive to action, as reflected in Drama, is viewed as constructive when it is modified by sensitivity to object relationships. Thus Drama in the 3-DPT Story is viewed as constructive when it is accompanied by Description. When Drama per se is used in the 3-DPT Story, there is the danger that the subject moves out or strives to move out toward his goals without regard for the feelings and needs of others, and/or without regard for circumstances.

Free Association is expected to appear in normal adult records but to a limited degree. Free Association in 3-DPT Stories appears to reflect the presence of affect-laden experiences, wishes or ideas that cannot be sublimated. Experiences that cannot be sublimated produce anxiety. Affect-laden experiences are readily roused by non-structured stimuli like the test forms and tasks of the 3-DPT. Thus Free Association in the 3-DPT Stories would appear to reflect anxieties around ideas elicited by the test forms and directions.

Exposition may also appear in normal adult records, but again to a limited degree. Exposition appears to reflect frustrated strivings for authority status. To "expose" is to exhort and to exhort is to teach, direct, command, toward a good goal. Such actions are the prerogative of authority, of a force to be dealt with. Thus, the use of Exposition, that is, the intent to teach, direct, set limits for attainment, in a 3-DPT Story reflects strivings for recognized status. Since strivings are experienced when a goal is not yet attained, these strivings for status and recognition through the use of Exposition reflect underlying feelings of inadequacy and inferiority. Thus the use of Exposition in the 3-DPT reflects feelings of inadequacy and inferiority that are unbearable and so must be denied and/or disguised.

Naming of test forms in the context of a 3-DPT Story represents blocking of ideation. Such blocking occurs only in extremely withdrawn, confused or perplexed subjects. Naming of test forms in the context of a 3-DPT Story is similar to the naming of colors in the Rorschach, or the naming of objects in a room in response to a word association test and "the naming of objects or touching of objects by confused schizophrenics for whom the only recognizable association to impression coming from the external world consists in naming them" (18, p. 28). Thus Naming in the 3-DPT Stories is a malignant indicator expected to occur only in records of subjects who are severely blocked due to withdrawal, confusion or perplexity.

Normal adult samples and child samples were expected to limit their Literary Styles in 3-DPT Stories to Description and Drama while the sick samples were expected to make use of Exposition, Free Association and Naming to the measure of their illness. To test these expectations the data on Literary Styles were submitted to chi square tests of significance. The results indicate that normal adult samples can be distinguished from child samples at better than the 1 per cent level of confidence on the variable Literary Styles in 3-DPT Stories. This finding does not support our expectation. Normal adults and children were not expected to differ significantly on Literary Styles in 3-DPT Stories. The data indicate further that normal adults are significantly different from psychotics at better than the 1 per cent level of confidence, from neurotics only at the 10 per cent level of confidence, and from alcoholics at less than the 10 per cent level of confidence. The differences between normal adults and neurotics and alcoholics fall short of statistical significance; thus they may indicate a trend only.

In an effort to discover what types of Literary Style significantly distinguish the child sample from the normal adult sample and to determine the factors that blurred the differences between normal adult samples and alcoholic and neurotic samples, the differences between normal adults and the other samples on each type of Literary Style were tested for significance.

The data in Table 28 indicate that the normal adult sample differs from the child sample at better than the 1 per cent level of confidence in the use of Drama in 3-DPT Stories. However, normal adults and children do not differ significantly in the use of the other four items of the Literary Style variable. The significantly greater use of Drama in 3-DPT Stories by children than by adults suggests that the use of Drama in 3-DPT Stories is an index to immaturity, reflecting impulsive urges to action. The data in Table 28 further indicate that the alcoholic sample tends to differ from the normal adult sample in the use of Exposition in 3-DPT Stories. Neurotics appear to differ significantly from normal adults on the use of Exposition (at better than the

5 per cent level of confidence) and in the use of Free Association (at better than the 1 per cent level of confidence). Psychotics appear to differ significantly from normal adults on the use of Naming, Exposition and Free Association in 3-DPT Stories, the differences being significant at better than the 2 per cent level of confidence.

It was also found that all samples use Description freely in 3-DPT Stories; children make free use of Drama but little or no use of Free Association. Alcoholics use Drama and Exposition freely; neurotics make free use of Drama, Free Association and Exposition, while psychotics make free use of Naming as well as of the other four Literary Styles.

In summary, it appears that Description is used freely in 3-DPT Stories by all samples and is therefore not a useful differential index. Drama used in 3-DPT Stories significantly distinguishes child samples from normal adult samples. Naming in the context of 3-DPT Stories is limited to psychotic samples, while Exposition and Free Association distinguish neurotic and psychotic samples from normal adult samples. Alcoholics tend to make freer use of Exposition in 3-DPT Stories than do normal adult samples.

## MANIPULATION CONSTRUCTIONS

Clinical experience with the 3-DPT suggested that Manipulation Constructions such as Building, Design, Sorting and Movement were important indices to maturation and adjustment.

### *Building Constructions*

It was indicated earlier that the use of Building was viewed as an expression of a need for direct affectional contact. Since the need for contact affection is expected to lessen with emotional maturity, the use of excessive Building was viewed as an index to emotional immaturity. As such it was expected to distinguish normal adults from children and normal adults from mentally ill subjects who were emotionally immature. To test this expectancy the normal adult performance was compared to the performance of children on the number of Buildings used, dichotomized into 0–2:3+, i.e., two or less buildings versus three or more buildings. This test disclosed that children offer significantly more Buildings than do normal adults, the difference being significant at the 5 per cent level of confidence. This finding lends support to hypothesis that Building Construction is an immaturity index. The normal sample was then compared to the sick samples on this same dichotomy but no significant differences were demonstrated. All samples were then compared to the normal adult sample on the dichotomy, 0:1+, i.e., no Buildings versus one or more Buildings.

The results indicate that children are significantly different from normal adults at the 5 per cent level of confidence, that is, 95 times out of 100, children use Building significantly more often than do normal adults. The data also indicate that the alcoholics and the total hospitalized sample are significantly different from normal adults at the 1 per cent level of confidence, using significantly more Buildings than normal adults use. Of the hospitalized sample, the neurotics tend to build less than the other sick groups. The fact that alcoholics and psychotics (catatonics and paranoid schizophrenics) are inclined to use many Buildings, while neurotics tend to use less than these sick groups but more than normal adults, lends further support to the hypothesis that Building Constructions in 3-DPT Productions are an index to emotional immaturity, for it is a clinical fact that alcoholics, catatonics and paranoid schizophrenics are very immature and dependent personalities while neurotics are less immature than these other groups.

Comparison of the normal adults with the other samples on the mean number and range of Building Constructions indicates that normal adults use substantially less Building in the Prenaming Production than do other samples. However, they use substantially more Building in the Postnaming Production than in the Prenaming Production, even exceeding several of the sick samples in the mean number of Buildings in the Postnaming Production. The increase of Building by the normal adult sample in the Postnaming Production and the decrease of building by sick samples (alcoholic psychotics, hospitalized neurotics, depressives and catatonics) and by children in the Postnaming Production suggest that normal adults experience and disclose increased insecurity as they progress through the tasks of the 3-DPT, while children and the sick samples experience increased confidence as they progress through the tasks of the 3-DPT. These differences in Number of Buildings used in the Prenaming and Postnaming Productions by normal adults and the other samples appear to be significant and are worthy of further investigation.

If Building is an index to the need for contact affection, then it would appear that Appropriate Building efforts reflect appropriate efforts to obtain contact affection and Inappropriate Building efforts reflect a search for contact affection through inappropriate sources. To test this hypothesis the normal adults who used Building in 3-DPT Productions were compared to the "builders" in the other samples on the basis of the number of Inappropriate Building efforts made. The results indicate that Inappropriate Building is rare among the normal adults and children, and when it does occur the subject offers only one Inappropriate Building effort. Among the sick samples, alcoholic psychotics, paranoid schizophrenics and depressives tend to make a substantial number of Inappropriate Building efforts, while neurotics are not likely to make Inappropriate Building efforts. These data suggest that alcoholic psychotics, paranoid schizophrenics and depressives make free use of inappropriate means to gratify contact-affectional needs.

### *Design Constructions*

Design Constructions refer to patterns of spatial relationships developed by the subject between the selected test forms. The relationships may reflect perspective in size, form or place. Design Constructions were seen clinically as a measure of a subject's sensitivity to others' attitudes toward him. Failure to use Design Construction need not imply inadequate sensitivity to others' attitudes toward the self, but the use of many Designs in one Production was viewed as an expression of anxiety about others' attitudes toward the self with efforts to dissolve these anxieties about interpersonal relations. The use of a great many test forms in Design, whether in one Design or in many Designs, was viewed as an expression of extreme hypersensitivity to others' attitudes which might reach such extreme dimensions as to cripple the subject for action.

Clinical experience with the 3-DPT suggested that normal adults use one or two Designs with few test forms; sick subjects either use no Design or many Designs with many test forms. Children seem to make little use of Design Construction. To test the significance of these clinical observations, the normal adult sample was compared to the other samples, first, on the dichotomy, 0–2:3+, i.e., two or less Designs versus three or more Designs and then on the dichotomy, 0:1+, i.e., one or more Designs versus no Designs.

When normal adults are compared to the other samples on the Number of Designs used, children tend to use three or more Designs in the Postnaming Production more often than normal adults. Alcoholics use three or more Designs in the Prenaming Production significantly more often than do normal adults, but they are not different from normal adults in this dichotomy in the Postnaming Production. The hospitalized subjects are not significantly different from normal adults in either Production in the use of three or more Designs.

Design dichotomized into 0:1+ indicates that children and catatonics use Design significantly less often than normal adults. This is in contrast to the previous disclosure that children use three or more Designs significantly more often than normal adults. These two sets of data indicate that children do not use Design very often, but when they do use Design they offer three or more Designs more often than normal adults. They further indicate that alcoholics tend to use Design more often than normal adults, and that paranoid schizophrenics also tend to use Design more often than normal adults, but the differences fall somewhat short of statistical significance. Neurotics appear to use Design about as often as normal adults.

These results lend support to the clinical observation that children generally make less use of Design than do normal adults. However, there are some children who make excessive use of Design. The tendency of the alcoholic and paranoid schizophrenic samples to use Design more often than normal adults was expected, but why the differences between the sick samples and the normal adults were not more significant is somewhat puzzling, in view of the clinically observed hypersensitivity in alcoholics and paranoid schizophrenics. Perhaps this hypersensitivity will be reflected more significantly by the large number of test forms used in Design by these sick groups. The hypersensitivity of the paranoid schizophrenic is strongly suggested by the large percentage of paranoid schizophrenics who use Design. Finally, the hypersensitivity of the alcoholics and the paranoid schizophrenics may be convincingly demonstrated by the large proportion of Inappropriate Designs offered by these two samples.

It is noteworthy that depressives made no use of Design at all. In this respect they differ from all the other samples. Depressives are apparently too irritable to stand aside and evaluate others' attitudes toward themselves.

### *Inappropriate Design*

A Design was considered inappropriate when the perspective of size, structure, or space was distorted. Inappropriate Designs appear to reflect distorted perceptions and conceptions about others' attitudes toward the self. The data indicate that the use of Inappropriate Design is more common to and is more consistently used by paranoid schizophrenics than any of the other sick samples. However, alcoholics, neurotics and catatonics are also subject to this deviation. The use of Inappropriate Design is rare among normal adults and children. These results lend support to the hypothesis that Inappropriate Design reflects distorted perceptions and judgments of others' attitudes toward the self.

### *Sorting Constructions*

Sorting of test forms on the basis of structure, function, time, place, or some combination of these dimensions was frequently offered by subjects in the 3-DPT Productions either within, as a substitute for, or extraneous to the Story. As was indicated earlier (p. 45), Sorting Constructions in the 3-DPT reflect ability to detect similarities, either concrete or abstract, between several test forms. It is noteworthy that Sortings, like Building and Design, were voluntary reactions of the subjects to the requests for a Story. Excessive use of Sortings and an excessive number of forms used in Sorting appear to reflect tendencies to overgeneralize, a disregard for significant differences, or a blurring of reality boundaries. Clinical experience with the 3-DPT suggested that Sorting is common to all samples. Children seem to use it less than normal adults, and normal adults seem to use it less than sick subjects. It was also noted that sick subjects tend to use more Sortings in each Production and include more test forms in their Sortings. This last observation is tested under the Unique Treatment of Test Forms.

TABLE 29

STATISTICAL SIGNIFICANCE OF DIFFERENCES BETWEEN NORMAL ADULTS AND OTHER SAMPLES ON SORTINGS DICHOTOMIZED INTO 0:1+

| Normal Adults vs. | Prenaming $X^2$(1df) p(1-tail) | Postnaming $X^2$ | p | Combined Pre- & Postnaming $X^2$ | p |
|---|---|---|---|---|---|
| Children | not sign. | 10.71 | .001** | 7.58 | < .01** |
| Alcoholics | 7.12 < .01* | 1.32 | > .20 | 9.01 | < .01* |
| Neurotics | not sign. | not sign. | | not sign. | |
| Para. schiz. | not sign. | not sign. | | not sign. | |

* Indicates significantly greater use of Sortings than normal adults.
** Indicates significantly less use of Sortings than normal adults.

Analysis of Sorting data indicates that Sorting in the 3-DPT is common to all samples but tends to be more common among alcoholic and hospitalized subjects than among normal adults, and less common among children than among normal adults.

Comparison of the samples in terms of the mean number of Sortings given, supports the trend noted above, that sick subjects tend to give more Sortings than normal adults and that children tend to make less use of Sorting than normal adults.

When normal adults were compared with the other samples on the Number of Sortings dichotomized into 0–2:3+ significant differences were demonstrated between normal adults and some of the sick samples. Alcoholics and neurotics use significantly more Sortings in one or other of the Productions than do normal adults. Alcoholics offer three or more Sortings significantly more often than do normal adults when the Sortings are counted in combined Productions. Neurotics use three or more Sortings in the Postnaming Production more often than normal adults. Catatonics tend to use more Sortings than normal adults, but the difference falls short of statistical significance. When the normal adult sample is compared to the other samples on Number of Sortings dichotomized into 0:1+ Sortings, the difference between alcoholics and normal adults is still maintained and even more pronounced, while the difference between neurotics and normal adults disappears. A significant difference (55) is demonstrated, however, between children and normal adults when this dichotomy is used. The children appear to use Sortings significantly less often than normal adults.

In short, alcoholics use Sortings more consistently and use significantly more Sortings than normal adults, while children use significantly fewer Sortings and use them less often than normal adults. Neurotics use significantly more Sortings in the Postnaming Production than normal adults.

The hospitalized psychotics do not appear to be significantly different from normal adults in the number of Sortings used. However, it is noteworthy that the mean Sortings offered by the catatonics and paranoid schizophrenics are greater than those offered by the normal adults.

Sortings, like Building and Design, were at times inappropriately constructed in terms of time, size, shape, place, weight, or other characteristic or dimension. Inappropriate Sortings appear to reflect a tendency to draw false generalizations and conclusions.

Comparison of the different samples in terms of the per cent of subjects offering Inappropriate Sortings indicates that normal adults do not differ from the other groups in this variable. Among normal adults, about 10 per cent gave Inappropriate Sortings; among children about 5 per cent gave Inappropriate Sortings, while 8 per cent of the alcoholics, 19 per cent of the neurotics, and 17 per cent of the hospitalized psychotics gave Inappropriate Sortings. It is noteworthy that Inappropriate Sortings offered by normal subjects appear to differ qualitatively from those offered by sick subjects, as evidenced by the examples cited previously.

The fact that Inappropriate Sortings are about as common to normal adults and normal children as to sick samples, while Inappropriate Buildings and Designs are rare among normal adults and children, suggests that inappropriate ideation, i.e., inappropriate conceptual relationships between objects, reflected by Inappropriate Sortings, is not as pathologic as are inappropriate efforts for contact affection, as reflected by Inappropriate Building, and inappropriate judgments about interpersonal relations, as reflected by Inappropriate Design.

Excessive use of Sorting in the 3-DPT appears to reflect rigidity in ideation. Sorting simply calls for ability to relate objects conceptually on one static trait in contrast to the complex dynamic conceptual relationships involved in the development of a Story or theme. The fact that alcoholics and neurotics use significantly more Sortings than normal adults, and that hospitalized psychotics use more Sortings, as measured by the size of the mean Number of Sortings and the range in Number of Sortings, suggests that the sick samples are not free enough to relate objects dynamically, and so resort to static relationships in their efforts to fulfill the directions: "Use test forms in one story." The fact that children use significantly fewer Sortings than normal adults suggests that children are much freer than normal adults to relate objects dynamically.

### *Movement of Test Forms in 3-DPT Stories*

Clinical experience with the 3-DPT suggests that the particular way in which a subject moves the test forms during the telling of the Story reflects the manner in which the subject moves out into the environment in an effort to fulfill his needs. The various ways in which subjects approach and move test forms during the telling of the Story have been described earlier. Briefly, they may be listed as follows:

0–No movement.
1–Forms only touched as an aid in identifying.
2–Human role playing.
3–Forms moved randomly.
4–Animal role playing.
5–Forms rejected manually.
6–Inanimate role playing.
7–Forms moved experimentally.

8–Forms moved into Design and/or Building.
9–Forms moved as an aid in identifying.

Normal adults were not expected to make much use of human role playing, random movements, animal role playing, manual rejection, inanimate role playing, and experimental movement. Normal adults were expected to limit Movement of Test Forms to no movement, touch as an aid in identifying, movement into design and/or building, and movement as an aid in identifying.

Children were expected to make free use of human role playing, animal role playing, inanimate role playing, movement into design and/or building, and movement as an aid in identifying. Sick subjects were expected to make free use of all forms of Movement.

For purposes of statistical testing these ten movement items were condensed into seven items by treating items 3, 5, and 7 (random, rejecting and experimental) as one item, and by treating items 4 and 6 (animal and inanimate movements) as one item.

Chi square tests were run to see whether normal adults differ significantly from the other samples in Movement of Test Forms. The results indicate that normal adults differ significantly from children and sick groups in the manner in which they approach and move test forms during the telling of the Story. Children and psychotics can be distinguished from normal adults in better than 99 times out of 100 on the basis of the frequency with which they make use of these movements. Neurotics can be distinguished from normal adults in better than 99 times out of 100, and alcoholics can be distinguished in better than 95 times out of 100 on the basis of these movement variables.

When the movement variables are arranged in rank order of frequency for each sample, it becomes apparent that each sample is identifiable by a unique Movement Pattern. The patterns support the expectation that normal adults predominantly touch or move test forms when identifying them, or move them into Design and/or Building, or don't touch them at all as they tell their Stories. Normal adults rarely use role playing of any kind, nor do they use random, experimental, or rejecting movements. Children freely move test forms as an aid in identification, use role playing freely, design and build freely, touch the forms as they identify them, or don't touch the forms at all. They rarely use random, experimental, or rejecting movements. Alcoholics freely move test forms as they identify them, touch forms as they identify them, or freely move forms into Design and/or Buildings much as the normal adults do. In addition, alcoholics freely use random, experimental, and/or rejecting movements. Role playing and no movements are rare among alcoholics. Neurotics freely move test forms into Design and/or Building. They freely touch forms as they identify them, but use random, rejecting, and experimental movements just as often. Role playing and no movement of test forms is rare among neurotics, as among alcoholics. Psychotics freely move forms as they identify them, move forms into Design and/or Building, but as freely use random, experimental, and/or rejecting movements. Role playing is also quite common among psychotics, but no movement or simply touching the test forms while identifying them is rare. This is in contrast to normal adults who commonly just touch the test forms as they identify them or don't touch the forms at all once they have begun their Story.

### *Inappropriate Movements*

Inappropriate Movements were clinically observed among the sick subjects and were viewed as evidence of potential for inappropriate acting out due to loss of contact with reality. It was therefore expected that the greater the loss of touch with reality, the more frequent the use of Inappropriate Movement of test forms in 3-DPT Stories would be. Since normal subjects were not expected to make Inappropriate Movements, chi square tests were not fitting. However, data were analyzed in percentages. Percentage differences reveal that Inappropriate Movements are limited to psychotic samples. These data suggest that this behavior reflects extensive loss of reality contact. This behavior appears to increase in frequency as the subject's contact with reality decreases and as such is apparently very malignant and is manifested only in extreme states of confusion.

In summary, Manipulation Constructions such as Building, Design, Sorting, and Movement of Test Forms in 3-DPT Stories were subjected to statistical tests to determine the degree to which they serve to differentiate normal adults from children, from alcoholics, and from hospitalized samples.

Building Construction significantly differentiated children from normal adults at the 5 per cent level of confidence, when the number of Buildings was dichotomized into 0–2:3+ and also when the number of Buildings was dichotomized into 0:1+. In other words, 95 times out of 100, children used Building more often than normal adults and used three or more Buildings more often than normal adults. These findings support the hypothesis that the number of Buildings is a maturational index reflecting a need for contact affection and as such is an immaturity index. Comparison of the sick samples with the normal sample on the dichotomy 0–2:3+ Buildings disclosed no significant differences between normal and sick subjects. However, comparison of normal adults with sick subjects on the dichotomy 0:1+ Buildings disclosed that alcoholics and the total hospitalized sample used Building significantly more often than normal adults. Of the hospitalized sample, the neurotics tended to build less often than the other sick samples, but more often than the normal adults. These findings lend support to the hypothesis that Building is an index of immaturity.

Inappropriate Building constructions were viewed as evidence of efforts to obtain contact affection through inappropriate means. Comparison of normal adults and children with the sick samples disclosed that the normal adults and children rarely used Inappropriate Buildings, hospitalized neurotics used these constructions somewhat more frequently than the normal samples but still only rarely, and neurotic alcoholics also made little use of Inappropriate Buildings. However, Inappropriate Building was common to alcoholic psychotics, the hospitalized paranoid schizophrenics, and depressives.

Design Constructions refer to the arrangement of the test forms into spatial relationships in contrast to the contact relationships used in Building. Design Constructions were viewed as an index of sensitivity to others' attitudes toward the self.

Comparison of the normal adult sample with the children and the sick samples on the Number of Designs used when the Designs were dichotomized into 0–2:3+, disclosed that children and alcoholics use three or more designs significantly more often than the normal adults, while hospitalized subjects do not use three or more designs significantly more often than normal adults. However, when normal adults were compared to the children and the sick samples on the number of Designs dichotomized into 0:1+, it was demonstrated that children and catatonics use Design significantly less often than normal adults while alcoholics and paranoid schizophrenics tend to use Design more often than normal adults. Depressives appear to ignore Design altogether.

Inappropriate Designs reflecting distorted perceptions and judgments about others' attitudes toward the self appear to be more common and more consistent among paranoid schizophrenics than in any of the other samples. Normal adults and children rarely use Inappropriate Design.

Sorting Constructions classify test forms on the basis of a common trait. Per cent and mean comparisons of the normal adults with the children and with the sick subjects indicate that sick subjects tend to use Sortings more often than normal adults and that normal adults use Sortings more often than children. Comparisons based on the dichotomy 0–2:3+ indicate that alcoholics and neurotics offer three or more Sortings more often than normal adults, but this difference falls short of statistical significance. When the normal adults were compared to the children and the sick samples on the number of Sortings dichotomized into 0:1+, the results indicated that alcoholics use Sortings significantly more often than normal adults, and children use Sortings significantly less often than normal adults. The neurotics tend to use Sortings more often than normal adults in the Postnaming Production, but the difference falls somewhat short of statistical significance. The catatonics and the paranoid schizophrenics display extreme intra-sample variation with unusually high means and a spread from 0 to 5 and 0 to 6, respectively.

Inappropriate Sortings reflect inappropriate ideation. They appear to be common to all samples, both normal and sick. This finding suggests that Inappropriate Sorting is less malignant than Inappropriate Building and Design.

Movement of Test Forms during 3-DPT Stories appears to reflect the subject's approach to his environment in his attempts to fulfill his needs and attain his goals. Statistical analysis of the Movement Patterns indicates that normal adults differ significantly from children and sick groups in the ways in which they approach the test forms during the telling of the Story. In fact, each sample has a unique Movement Pattern based on frequency of usage. Describing each sample by its three highest frequencies provides the following patterns: Normal adults: move to identify; touch or move into Building or Design; don't touch and human movement. Children: move to identify; human movement; move into Design and/or Building. Alcoholics: move to identify; touch and/or move into Design and Building; move randomly, experimentally and/or reject manually. Neurotics: move into Design and/or Building; touch; move to identify and reject; experiment or move randomly. Psychotics: move to identify; move into Design and/or Building; move randomly; reject and experiment; and human movement.

Inappropriate Movements appear to reflect inappropriate acting out in the environment due to extensive loss of contact with reality. They were common only to psychotics, particularly the catatonics and the paranoid schizophrenics. Inappropriate movements are apparently very malignant indicators.

## BACKGROUND FOR EVENTS

Background for Events in the 3-DPT Stories refers to the particular place or places where the events of the Story transpire. In the 3-DPT situation the subject must create whatever background he needs since the test materials and directions do not provide settings nor offer clues to settings such as are provided by the test materials of the

TAT, MAPS, CAT and other such pictorial projective tests.

The significance of the Backgrounds in the 3-DPT Stories is not yet clear; however, they appear to reflect the life spaces with which the subject is primarily concerned.

The Backgrounds offered in the 3-DPT Stories were classified into the following categories: home, public place, isolate place, religious place, water setting, desolate place, geography, mythological place, futuristic place, and vague or no indicators.

All samples were expected to make free use of home and/or public place since it is expected that all subjects are concerned with their status in the home and in the community. Normal adults were not expected to use mythological or futuristic backgrounds, isolate, desolate, water or religious places, nor were they expected to be vague about the Background. Children were expected to differ from the normal adults only in the freer use of mythological or futuristic Backgrounds. Sick subjects were also expected to make free use of home and public places, but in addition they were expected to use isolate, desolate, water and religious places. Few subjects were expected to be vague about the Background.

To test the hypothesis that normal adults differ from children and from sick samples in the types of Backgrounds created for the 3-DPT Stories, the data were subjected to chi square tests of significance disclosing that normal adults differ from children at the 20 per cent level of confidence and from alcoholics at better than the 10 per cent level of confidence, in the type of Backgrounds used in 3-DPT Stories. The difference between children and normal adults falls far too short of statistical significance to permit the inference that a trend exists, but the difference between the alcoholics and the normal adults, though short of statistical significance, is still great enough to permit the inference that, given larger samples in each population, the difference would be statistically significant. Normal adults do not appear to be different from the hospitalized neurotics in the Backgrounds created for the 3-DPT Stories as measured by this test of significance, but normal adults do appear to differ from the hospitalized psychotics in this variable at better than the 5 per cent level of confidence. In other words, normal adults can be distinguished from hospitalized psychotics in better than 95 times out of 100 on the basis of the Backgrounds created for the 3-DPT Stories.

Comparison of the samples on the basis of the per cents of each sample using the various Background categories discloses some interesting differences both between normal adults and the sick samples and among the sick samples themselves. Home and public place are common Backgrounds in all samples, with home Background being the most common for the normal adults, children, and neurotics. It is noteworthy, however, that alcoholics and paranoid schizophrenics use public place Backgrounds more often than they use home, or any other Background. It is also noteworthy that alcoholics, depressives, and paranoid schizophrenics make free use of desolate Backgrounds in contrast to normal adults, children, neurotics, and catatonics, who use it little or not at all. Except for the neurotics and the catatonics who do not use religious Backgrounds, the religious Backgrounds are used as often by the normal and the sick samples. Geography is also used about equally by all groups but the catatonics. The isolate place Background appears to be very common for all groups. This finding was unexpected because normal adults and children were not expected to make much use of isolate places. This finding suggests that a goodly proportion of all populations, both normal and sick, feel alone, apart, isolate, in the home and/or in public places.

The data further suggest that normal adults and children are primarily concerned with status in the home and with status in the wider community and that a fair proportion of normal adults and children feel alone in the home and/or community. Alcoholics and paranoid schizophrenics appear to make less use of isolate places than of desolate places, suggesting that these two groups are less likely to withdraw from contact; rather, they entertain morbid ideas and feelings about their reality status relationships. Alcoholics and paranoid schizophrenics appear to be particularly concerned with their status in the wider community and only secondarily with their status in the home. This pattern is the reverse of the normal pattern. Neurotics use the home Background predominantly, and all other Backgrounds only rarely. This suggests that the neurotic is almost solely concerned with his status in the home setting. Catatonics appear to make freest use of the home and isolate Backgrounds suggesting that the catatonic is also primarily concerned with his status in his home setting, but he meets his problem by withdrawal into fantasy for gratifications. The depressives appear to use home Backgrounds and desolate places equally often, suggesting morbid concern with status in the home setting.

The rarity of water Backgrounds in the 3-DPT Stories of the sick samples is surprising in view of the popular clinical notion that water content in projective techniques reflects deep-seated dependency needs. Our finding that water Backgrounds are as common for normal adults as for alcoholics is in accord with the findings in Rorschach studies which disclosed that water contents are as common in normal adults records as in alcoholic records (207).

The use of one or two Backgrounds was found to be most common for all samples. Normal adults use three Backgrounds only occasionally and never use more than three in one Story. Children give one or two Backgrounds most often, but occasionally give more than three Backgrounds in one Story. Normal adults are rarely if ever vague about the Backgrounds of the Story, while children are more apt to be vague about the Background. Alcoholics, depressives and paranoid schizophrenics either give one or two Backgrounds or they give more than three Backgrounds, while neurotics and catatonics are most likely to give one Background, only occasionally giving two, but apparently never using more than two Backgrounds in one Story. Catatonics are often vague about the Story Background while neurotics are never vague about the Background.

These findings suggest that the use of three or more Backgrounds in one Story reflects widespread concern for status in the various life spaces while vagueness of Background in a 3-DPT Story reflects denial of concern about status in various areas of the life space.

In summary, the data presented in this section indicate that normal adults can be distinguished from alcoholics in better than 90 times out of 100 and from psychotics in better than 95 times out of 100 on the basis of the Backgrounds used in the 3-DPT stories.

Normal adults appear to use home, public places and isolate places most commonly. They tend to use one or two Backgrounds in one Story, rarely using three or more. Children appear to differ somewhat from normal adults in the freer use of three or more Backgrounds and of mythological Backgrounds. Alcoholics and paranoid schizophrenics make freer use of three or more Backgrounds and of mythological adults; they use public places more freely than the home Background and make free use of desolate places but little use of isolate places. Depressives also make free use of multiple Backgrounds in one Story and they use desolate Backgrounds freely in connection with home Backgrounds. Neurotics seem to use one Background almost exclusively, namely, the home Background. Catatonics also use one Background per Story and tend to use the home or an isolate place. Catatonics are also frequently vague about the Background.

### AGENTS AND OBJECTS NOT REPRESENTED BY TEST FORMS

Agents and objects introduced into 3-DPT Stories are expected to be represented by test forms, in view of the directions which state ". . . then tell a story using the test forms you have chosen in your story." This task calls for the development of a theme and the representation of the agents and objects in the Story by Test Forms Selected. Failure to represent agents and objects by test forms is the reverse of Isolate Manipulations and Ideas. In these isolate behaviors the subject introduces test forms and identifies them but does not incorporate them into the theme of the Story being developed. Isolate Ideas and Manipulations reflect ideas that are unbearable and therefore split off from the main stream of conscious thought; thus they appear meaningless and are rendered harmless. Isolate Ideas reflect severe blocking in ideation around unbearable affect-laden experiences.

In contrast, the failure to represent verbalized concepts in the 3-DPT story by test forms appears to represent ideas that have a high positive valence and so are freely, and often logically, incorporated into the main stream of thought. These free-flowing ideas may originally have been unacceptable but they have been made palatable by rationalizations. However, guilt-rousing potential of these ideas is still operative, preventing their translation into concrete form and action. Thus Agents and Objects Not Represented by Test Forms refer to ideation that may not or cannot be realized. These ideas may be present in moderate degree in normal adult samples as well as in other sample populations. However, normal adult samples are expected to differ significantly from the other sample populations when compared on the Number of Agents and Objects Not Represented by Test Forms in a 3-DPT Story.

To test the expectation that the normal adult sample differs significantly from the other samples in the use of Agents and Objects Not Represented by Test Forms, the data were subjected to chi square tests of significance. First the normal adult sample was compared to the other samples on the dichotomy 0:1+, i.e., none as against one or more objects not represented; then the comparison was made on the dichotomy 0–2:3+.

The test of significance on the dichotomy 0:1+ disclosed that the child sample is the only sample that differs significantly from the normal adult sample in the use of Agents and Objects Not Represented by Test Forms. The difference is significant at better than the .1 per cent level of confidence, which means that in 99.9 times out of 100, a child sample can be distinguished from a normal adult sample on the dichotomy 0:1+, with the greater incidence appearing in the records of the children.

This same test of significance (0:1+) does not disclose any significant differences between normal adults and the sick samples, indicating that this test is too severe to differentiate normal samples from sick samples on this variable. Accordingly, the data were tested on the dichotomy 0–2:3+

to see whether the normal sample is significantly different from the sick samples under less severe standards.

The results indicate that the children make the greatest use of Agents and Objects Not Represented by Test Forms, both in the Prenaming and Postnaming Stories. The excessive use of this variable by the children suggests that this variable may be viewed as an index to immaturity. Further, this finding lends support to the interpretation that this variable reflects wishful thinking, i.e., ideas and urges that may not or cannot be acted out in reality.

The data further indicate that the psychotics can be distinguished from the normal adults at better than the 1 per cent level of confidence by the presence of 3+ Agents or Objects Not Represented by Test Forms in 3-DPT Stories. Alcoholics are distinguishable at better than the 5 per cent level of confidence from the normal adults on this same measure of this variable, and neurotics differ little from normal adults.

The results reported here suggest that the presence of Agents and/or Objects Not Represented by Test Forms in Stories in the records of children is within normal limits. However, if these non-represented concepts reach or exceed three in an adult record, they indicate the presence of excessive striving for gratification that may not or cannot be fulfilled in reality.

### USE OF FIRST PERSON IN 3-DPT STORIES

The Use of the First Person, i.e., the use of personal references in 3-DPT Stories whether or not the personal objects are represented by test forms, appears to reflect some degree of insecurity which the subject attempts to relieve by resorting to personal references, experiences, or preferences. To speak freely of the self to an interested listener is a comforting experience. Thus, it would appear that the use of self references by the subjects being tested gives them comfort and reassurance in the testing situation.

The different forms of self-references given in 3-DPT Stories were classified (55) into five categories as follows:

1. Test forms treated as personal reality-complete identification.
2. Identifications made through recall of personal experiences.
3. Test forms represent personal objects symbolically, not realistically.
4. Test forms stimulate expression of personal preferences.
5. Test forms stimulate Stories heard or read.

Normal adults were not expected to make much use of personal references in 3-DPT Stories. When they did use such references they were expected to preface their remarks with qualifiers such as "this reminds me of," "this could represent," "this could be used as," etc. In other words, when normal adults make use of personal references, they are expected to indicate very clearly that they are aware of the differences between the test forms and reality. Thus they are expected to use the test forms as symbols of reality rather than as reality.

Children also were expected to make little use of first person references in 3-DPT Stories. When they did use such references they were expected to make use of stories heard or read. Children, like normal adults, were expected to make clear distinctions between the symbols and reality.

Sick subjects were expected to use a variety of self-references. Particularly, they were expected to make free use of personal references that blurred the distinction between symbols and reality. In other words, sick subjects were expected to use first person references without offering adequate evidence of their awareness of the distinction between test forms and reality.

To test the hypothesis that normal adults do not differ from children but do differ from the sick samples in Use of First Person in 3-DPT Stories, the data were submitted to chi square tests of significance. The results disclose that normal adults differ from children at better than the 5 per cent level of confidence in the Use of the First Person in 3-DPT Stories. Normal adults use significantly more personal references in the Prenaming Story than children. This finding does not support our expectation that normal adults and children would not differ in this variable. The data further indicate that normal adults differ from alcoholics at the 10 per cent level of confidence, with alcoholics tending to use first person references more often than normal adults. This difference falls short of the level of statistical significance which is accepted as convincing; however, it does indicate a trend. The differences between the normal adults and the hospitalized neurotics and psychotics are significant at better than the .1 per cent level of confidence. In other words, normal adults can be distinguished from hospitalized subjects in better than 99.9 times out of 100 on the basis of the number of self-references used in the 3-DPT Prenaming Story, with hospitalized subjects making free use of self-references.

The data indicate that 75 per cent or more of the normal adults and of the children do not make use of personal references in 3-DPT Stories. Among the alcoholics about

70 per cent do not use personal references in 3-DPT Stories, while among the hospitalized subjects only 50 per cent or less do not use some form of personal references in 3-DPT Stories. More useful differences are revealed by comparison of the samples in terms of the particular types of self-references used. Thus, normal adults and children do not identify the test forms as reality. This finding supports our expressed expectation.

Normal adults and children use the test forms as symbols of reality more often than other self-reference forms, when they use self-references at all. When alcoholics use self-references they tend to use the test forms as reality as often as they use them as symbols of reality. Neurotics tend to use the test forms as reality quite freely, but they also make very free use of memories of stories heard or read. It is noteworthy that the neurotic group is the only one that makes much use of memory of stories heard or read. Depressives appear to make freest use of personal experiences, and are inclined to use more than one form of self-reference in one Story. Catatonics appear to limit their use of the personal references to the treatment of test forms as reality. Paranoid schizophrenics appear to make free reference to personal experience, treat test forms as reality, and express personal preferences.

In summary, the data presented in this section on the Use of the First Person in 3-DPT Stories indicate that normal adults differ from children and from sick samples in this variable. It is noteworthy, however, that children differ from the normal adults by virtue of the fact that children make significantly less use of personal references. On the other hand, the sick samples give significantly more personal references in 3-DPT Stories than do normal adults.

Furthermore, normal adults differ from the sick samples in the types of personal references used. Thus, normal adults use test forms primarily as symbols of reality rather than as reality, and they preface their identifications with such qualifiers as, "this reminds me," "this might be," "this could represent," etc. In contrast, sick subjects freely use the test forms as reality and/or recall personal experience or stories heard or read. Catatonics limit themselves almost exclusively to the use of test forms as reality. This finding lends validity to the assumption that the use of personal references in 3-DPT Stories serves as a security technique. The catatonic, being the most withdrawn of the sick subjects, needs to assure his reality through concrete form; thus, by identifying himself with the test forms, he confirms his own reality existence. The depressive uses predominantly references to personal experiences. This is not surprising in view of the involutional's need to hang on to past experience to assure himself of his self-worth. Paranoid schizophrenics use all forms of self-reference as freely as the alcoholics, except for memory of stories heard or read, while the neurotics are unique in their free use of references to stories heard or read.

## Arbitrary Verbalizations in 3-DPT Stories

Arbitrary Verbalizations in 3-DPT Stories refer to illogical ideas offered by the subject during the development of a Story. Such illogical ideas are viewed as more pathological than Isolate Ideas and Manipulations and they differ from these isolate behaviors in the respect that arbitrary statements are made completely (or so it seems) out of context, while an Isolate Idea appears to be directly stimulated by a test form, as evidenced by the fact that the Isolate Idea is applied to a test form which has been selected but has not been incorporated into the main theme of the Story.

Arbitrary ideas reflect association disturbances which interfere with logical sequence of ideas. Bleuler ascribes association disturbance to autism which reduces the influence of experience so that, "thinking becomes detached from experience and takes a turn into deviant pathways. Blocking occurs precisely at the important points so that the patient is incapable of completing his thinking on certain subjects. What is worse, instead of blocked associations others crop up which do not belong at all to the train of thoughts or belong to another juncture of it. If the inappropriate idea connections become very numerous, the train of thought cannot reach any conclusion since the direction of thinking is constantly changing [18, p. 80]."

Arbitrary statements in 3-DPT stories, as in ordinary conversation described by Bleuler, are a pathological indicator reflecting association disturbances due to withdrawal of attention and affect from reality experience. Such deviant statements are not expected to appear at all in the records of normal samples, nor even in the records of neurotics. They are expected to flourish in the records of psychotics.

The normal adult sample does not differ significantly from the child and the neurotic samples in the use of arbitrary statements in 3-DPT Stories, when the samples are compared on the dichotomy 0:1+. This finding indicates that arbitrary statements appear in the records of these three samples purely by chance, rather than because of any particular characteristic of these sample populations. On the other hand the normal adult sample differs at better than the 1 per cent level of confidence from the alcoholic and the psychotic samples in Arbitrary Verbalizations in 3-DPT Stories when this variable is dichotomized into 0:1+, a most severe test of performance. This finding suggests that the presence of even one arbitrary statement in a 3-DPT Story has severe pathological implications.

The fact that ambulatory alcoholics offered arbitrary statements in 3-DPT Stories almost as freely as the hospitalized psychotics suggests that the alcoholics are basically autistic and suffer disturbances in association of ideas. Apparently the alcoholic can function sufficiently well in the free, unstructured milieu of society due to his ability to inhibit disturbed ideation when sober, mask disturbed ideation under the guise of drunkenness, or limit activities to simple, stereotyped situations. However, under the pressure of new, challenging, and affect-rousing situations such as are presented by the 3-DPT stories, the cultivated defenses of the alcoholic are useless and his arbitrary thinking and illogical autistic ideation come through.

In summary, the data presented indicate that the presence of even one arbitrary statement in 3-DPT Stories reflects the presence of autistic thinking and as such reflects underlying pathology.

### EVIDENCE OF FIXED IDEAS IN THE 3-DPT

Fixed Ideas in the 3-DPT are reflected by the repetition of a theme in two or more Stories; by the continuation of a theme of one Story in the next; by the use of the definite article and/or the possessive case in the associations made to the test forms during the Naming Test and/or through the inability to give one or more Stories when requested. The first three indices of Fixed Ideas are reflected by varying degrees of perseveration of ideas while the last index is reflected by inhibition of ideation. Both perseveration and inhibition of ideas reflect impaired flexibility of thought.

It was expected that normal adults would be able to give a Story with a unique theme to each Story, and it was further expected that normal adults would rarely make use of the possessive case and/or the definite article in associations to the test forms during the Naming Test. Children and sick samples were expected to differ from normal adults in this variable.

To test these expectations, the data were subjected to chi square tests of significance (55). First the normal adult pattern of performance was tested against the performance patterns of the child and sick samples. Then the normal adult performance on each item of this variable was tested against the performance of each of the other samples on each item of the variable.

The Evidences of Fixed Ideation in the 3-DPT are classified as follows:

1. No evidence of fixation.
2. Same theme in two or more Stories.
3. Continuation of theme of one Story through two or more Stories.
4. Inability to give Stories as requested.
5. Use of definite article and/or possessive case in the Naming Task.

It was found that normal adults differ from children, alcoholics and hospitalized psychotics at better than the .1 per cent level of confidence and from hospitalized neurotics at better than 1 per cent level of confidence on Evidence of Fixed Ideas in the 3-DPT. This finding supports our expectations.

Comparison of normal adults to the other samples on each index of Fixed Ideas indicates that normal adults differ from children at better than the .1 per cent level of confidence on the fixation index, inability to give a Story as requested, with children displaying significantly greater inhibition of ideation than normal adults. The data further indicate that children tend to repeat the same theme in several stories more often than normal adults, but the difference here falls short of statistical significance. No statistical difference could be demonstrated between children and normal adults in the number in each group giving no evidence of fixation, nor was there any significant difference between normal adults and children in the use of the possessive case and definite article or in the continuation of one theme through several Stories.

The comparison also indicates that normal adults are significantly different from alcoholics at better than the .1 per cent level of confidence in the use of continuation of one theme through several Stories. Furthermore, the alcoholic sample tends to have fewer subjects giving no evidence of fixation than the normal adult sample, but this difference falls somewhat short of statistical significance. The alcoholic sample and the normal sample do not appear to differ significantly from each other in the use of the same theme in two or more stories, or in the use of the possessive case and/or the definite article in the Naming Test. Alcoholics, like normal adults, appear to be able to give Stories when requested.

Comparison of the normal adult sample with the hospitalized neurotic sample on the use of the different indices of fixation in the 3-DPT indicates that normal adults and neurotics do not differ significantly on any one of these indices. However, neurotics tend to make greater use of the same theme in two or more stories and less use of possessive case and/or definite article in the Naming Test.

Comparison of the normal adult sample with the psychotic sample indicates that normal adults can be distinguished from psychotics at better than the 5 per cent level of confidence on the number of subjects who do not display evidence of fixation in the 3-DPT. Also, normal adults differ from psychotics at better than the 2 per cent level of confidence in the use of the same theme in two or more Stories. Although no significant differences could be demonstrated between normal adults and psychotics in the continuation of one theme through several Stories and in inability to give Stories, it appears that normal adults do not use these indices of fixation while psychotics do.

In summary, the data presented on the variable, Fixed Ideas in the 3-DPT, indicate that normal adults differ significantly from children and sick samples in the manifestation of Fixed Ideas. Normal adults seldom disclose Fixed Ideas in the 3-DPT, but when they do, they tend to do so by the use of the same theme in two or more Stories and/or by the use of the possessive case and/or the definite article in the Naming Test. Children disclose Fixed Ideas significantly more often than do normal adults by their inability to give a Story, and by the tendency to make greater use of the same theme in two or more Stories. Alcoholics are distinguishable from normal adults by their significantly greater use of the fixation index, continuation of a theme through two or more stories. Neurotics do not appear to differ significantly from normal adults in evidence of Fixed Ideas in the 3-DPT; however, neurotics tend to use the same theme in two or more Stories more often than normal adults and to use the possessive case and/or definite article in the Naming Test less often than normal adults. Psychotic samples are distinguishable from normal adults by the frequency with which they offer the same theme in two or more Stories and by the widespread evidence of Fixed Ideas in their 3-DPT performances.

# Chapter V

# General Behavior Variables in 3-DPT Productions

The General Behavior Variables referred to here are those readily observable and recordable behaviors in the test situation that are peripheral to the stimulus value of the test materials. These General Behavior Variables appear to express varying degrees of dependency, fear of disability, fear of own ideas, urges and actions, fear of responsibility and resistance to responsibility for ideas, object relationships, and actions. They reflect the subject's "characteristic style" (170) of reacting to limits and of relating to those others who set limits to behavior. These behaviors are provoked in this test situation by the impact of the 3-DPT Production directions which limit the subject to sequential action and ideation in a new and ambiguous setting. The 3-DPT Production situation tends to frustrate impulsive urges to action and ideation by requiring the subject to delay action and ideation (in the face of potent stimuli) until three commissions have been given by the examiner. This test situation further frustrates impulsive action and ideation by requiring that action and ideation be logically integrated in a goal-directed manner. These frustrating aspects of the 3-DPT Production situation are similar to those life situations wherein the subject is faced with the responsibility of treating a problem situation in a logical manner by integrating ideas, objects, and actions. The problem-solving nature of the 3-DPT Production situation is more challenging than the task of identification and association called for in the 3-DPT Naming Test and in the Rorschach Type Tests. The problem-solving nature of the 3-DPT Production situation is also more challenging than the tasks of such semi-structured tests as the TAT, wherein the subject is expected to present ideas and object relationships in logical sequence in a goal-directed manner, but is not expected to integrate action with his ideas and object relationships. The 3-DPT Production situation is even more challenging than the problem-solving tasks of such tests as the MAPS Test, wherein the subject is also expected to present ideas, object relations and actions in a goal-directed manner as is required in the 3-DPT Production, for, in contrast to the 3-DPT, the MAPS Test provides structured, stereotyped backgrounds against which to solve the problems. The challenging nature of the 3-DPT Production tasks rests not only in the limits to present ideas, object relations, and actions in a goal-directed, integrated manner, but also in the ambiguous nature of the test materials and the utter lack of structure of the background.

These challenging aspects of the 3-DPT Production tasks tend to provoke these General Behavior Variables (reflecting dependency) not only in sick samples but also in normal adult and child samples. However, it is expected that these behaviors would be milder in form in normal samples than in sick samples. Sick samples are expected to make stronger protests of disability, make repeated requests or demands for help, or attempt to evade the responsibility altogether.

The General Behavior Variables elicited in the 3-DPT

Production tasks and selected for study are classified as follows:

1. *Subject criticizes Story and changes it (i.e., he corrects it or gives another).* — This behavior reflects a judgmental set (170) with critical attitudes toward personal performance and with a desire and a readiness to work toward improvement. It reflects mild frustration in the face of a challenging problem, frustration that leads to efforts to improve. Such behavior is expected to appear primarily in normal adult samples.

2. *Subject criticizes Story but does not change it (i.e., he neither corrects it nor rejects it).* — This behavior, like the preceding one, reflects a judgmental set with critical attitudes toward personal performance but with resignation about personal inadequacy. It also reflects frustration in the face of a challenging problem, but with inadequate motivation to work for improvement. This behavior is expected to appear in limited degree in normal samples and to greater degree in sick samples.

3. *Subject asks for reassurance from examiner.* — This behavior reflects doubt of personal ability with fear of assuming responsibility and efforts to avoid the full responsibility by involving the examiner. This behavior may appear in mild form and to a limited degree in normal samples, but in sick samples this behavior is expected to be flagrant and intense. In this class of behavior the subject uses such phrases as "Do you want?" "Do you mean?" "Is that right?" "Did you say?" "Should I take more?" "Should I say more?" "Is that enough?" etc. The intensity of this behavior may be determined by the extent of the requests which are measured by the next two items in this variable, namely the

number of times directions must be repeated to overcome the resistance to responsibility for expressing ideas and actions.

4. *Subject responds to tasks after one repetition of directions.* — This behavior is related to the preceding one, since directions are repeated when the subject attempts to get help or reassurance from the examiner. Ability to respond to the directions after one repetition of the directions reflects a moderate degree of fear of responsibility for personal ideas and actions. This degree of dependency is expected to be fairly common in normal samples.

5. *Subject needs two or more repetitions of directions to overcome resistance.* — This behavior reflects intense fear of and resistance to responsibility for personal ideas and actions with intense dependency needs. This behavior is expected to be rare in normal adult samples.

6. *Subject protests disability to give a Story.* — This behavior reflects extreme feelings of inadequacy and fear of responsibility for own ideas and actions with feelings of helplessness and despair about the disability. It reflects extreme dependency and is recorded only after the subject continues to protest disability after three repetitions of directions. This behavior is expected to appear only in sick samples.

7. *Subject expresses friendliness to examiner.* — Subjects who move out to the examiner with friendly overtures are terrified of the responsibility for personal action and ideation. They try to mask their fears and inadequacies and at the same time to escape the responsibility by gaining control of the situation through seduction of the examiner. They try to divert the attention of the examiner from the tasks at

hand by their charm, wit, and by flattery. This behavior is expected only in very sick groups.

8. *Subject expresses hostility to the examiner.* – Subjects who move out to the examiner with hostility, like those who move out with friendly overtures, are terrified of the responsibility for personal ideas, actions, and object relationships and attempt to mask their fears and inadequacies by an aggressive display of disdain for the situation. These subjects apparently have little faith in their ability to beguile and charm others and so resort to disdain and defiance in order to intimidate the examiner. Through intimidation, they hope to gain control of the situation, thus escaping the responsibility for ideas and actions as defined, without feeling a loss of status. This behavior is expected to be displayed in sick groups only.

9. *Subject states clearly that he must plan before he acts.* – This behavior reflects terror of own ideas and urges for object relations and actions with efforts to mask the terror and inhibit the unacceptable ideas and urges by deliberate stalling for time until controls have been mobilized. This behavior is expected to be displayed only in sick samples.

10. *Subject's Story implies striving with no attainment.* – This item of behavior is identified after the subject has moved into the tests, trying to assume responsibility for his own ideas, actions, and object relations. This behavior, though different from the others in the respect that it is observed in the actual process of performing the task, is included here because it reflects – as do the other behaviors here described – a characteristic manner of facing responsibility. It indicates that the subject strives to assume responsibility for his actions and ideas but is unable to carry through to his goals in spite of his urgent efforts. This be-

havior reflects striving for attainment with doubt of success, either because the goals are unrealistic, or because of ambivalence of goals. This behavior is not expected to appear in normal adult samples.

To recapitulate, it was expected that normal adults and children would display mild forms of dependency behaviors requiring minimal reassurance from the examiner, while sick subjects would display extreme forms of dependency behaviors with intense resistance to responsibility for ideas, object relations, and actions. In short, it was expected that normal samples would differ significantly from sick samples in the frequency of the display of these general behaviors as well as in the particular styles of behavior displayed in the 3-DPT Production situations.

To test these expectancies the data on general behavior variables were submitted to chi square tests of significance.

## NORMAL SEX DIFFERENCES IN THE DISPLAY OF GENERAL BEHAVIOR VARIABLES

Before testing the differences between the normal samples and the sick samples in the display of these behavior variables, it seemed wise *to determine to what degree these behaviors appear in normal samples* and to test the differences in frequency of display of these behavior variables between normal men and normal women. This test of sex differences was suggested by the empirical fact that the Western culture accepts as fitting expressions of dependency in females while frowning upon such expressions in men. It was therefore expected that normal women would express such behaviors more freely than would normal men in the 3-DPT Production situations. However, it was expected that these *sex* differences would be far less significant than the differences between normal samples and sick samples.

To test the expectancy that these general behaviors appear in normal samples as well as in sick samples, an intra-sample test was run on the dichotomy *Display versus no Display* of these behaviors. The results indicate that normal men do not as a rule display these behavior variables during the 3-DPT Productions. On the other hand, normal women appear to display these behaviors as often as not. This finding appears to reflect the Western cultural attitude toward the sexes, namely, that women may express feelings of dependency without loss of status and possibly with increase in feminine status while men may not express feelings of dependency without losing some degree of male status. Normal children are more likely not to display these behaviors than to display them in the 3-DPT Production situations. In contrast to the children are the alcoholics and the hospitalized psychotic samples who display these general dependency behaviors in 3-DPT Productions significantly more often than not. In all cases, the sick samples indicated above display these behaviors at better than the 1 per cent level of confidence. Hospitalized neurotics, on the other hand, like normal women, are just as likely to display as not to display these behaviors.

These findings indicate that these behaviors may be displayed by normal subjects as well as by sick subjects, but the display in normal samples is determined primarily by the behavior of the females in the normal sample, since normal men rarely display such behaviors in the 3-DPT Productions. These sex differences may be expected to operate in normal child samples as well as in the normal adult samples. The findings further indicate that these behaviors are flagrantly displayed by sick samples, particularly alcoholics and hospitalized psychotics.

Comparison of normal men and normal women on styles of behavior displayed discloses that women not only display such behaviors significantly more often than normal men, but that they also display a larger variety of these behaviors than normal men. However, the expectancies of these behaviors in these normal samples were too low to permit tests of significance except for the dichotomy, display versus no display. On this dichotomy, normal men and women differ at better than the 5 per cent level of confidence. Comparison of normal women with children on these behavior variables disclosed no significant differences in the display of any of these behavior styles. Comparison of normal adults and children on these behavior styles indicates no significant differences. On the item, 2+ repetition of directions, the children excel the normal adults at better than the 10 per cent level of confidence. Although this difference indicates a trend, it falls short of the degree of significance acceptable for prediction.

Comparison of the normal adult sample with the sick samples on these behaviors indicates that normal adults differ significantly from alcoholics *on striving with no attainment* and on the need for 2+ *repetitions of directions.* These differences can be demonstrated in better than 98 times out of 100 or at better than the 2 per cent level of confidence. It is noteworthy that tests of significance betwen normal women and alcoholics also disclosed significant differences on strivings and 2+ repetitions. The data further indicate that normal adults differ significantly from hospitalized neurotics at better than the 1 per cent level of confidence in the behavior, *criticism, no change in story,* with neurotics displaying this behavior significantly more often than normal adults. Normal women per se also differ significantly from the hospitalized neurotics on this behavior, the difference being significant at better than the 5 per cent level of confidence. Neurotics appear to have a strong tendency to express *strivings with no attainment*, *protest disability* and require 2+ *repetitions* more often than normal adults, but these differences fall somewhat short of statistical significance.

Furthermore, the psychotics display these general behaviors significantly more often than the normal adults, in fact at better than the .1 per cent level of confidence, or better than 99.9 times out of 100. Hospitalized psychotics, including depressives, catatonics, and paranoid schizophrenics, appear to require excessive reassurances, strive without attainment, protest disability, express hostility, require 2+ repetitions of directions, and generally give expression to these behaviors more often than normal adults, the differences being significant on these styles in better than 99 times out of 100. It is noteworthy that statistical comparison of normal women with hospitalized psychotics on these behaviors also disclosed significant differences on these same items at better than the 1 per cent level of confidence.

It is noteworthy that *changing a story* to improve on performance appears to be a style of behavior limited to the normal adult sample, while display of friendly or hostile overtures does not seem to occur in the normal adult sample. Statement of need to plan before acting appears to be rare in all samples, but when it does occur it appears to reflect pathology.

Since children do not appear to differ to any significant degree from normal adult samples in any of these behaviors except for a tendency to require 2+ repetitions more often, it was expected that children, like normal adults, would differ significantly from the sick samples in these behavior variables. Tests of significance between children and the sick samples verified this expectation. All sick samples display these behaviors significantly more often than children. Specifically, alcoholics disclose *strivings with no attainment* more often than children at better than the 2 per cent level of confidence and tend to protest disability and require 2+ repetitions more often than children. Neurotics criticize without change of story and protest disability significantly more often than children, the differences being significant at better than the 1 per cent and 2 per cent levels of confidence, respectively. Psychotics ask for reassurance, protest disability, require 2+ repetitions, and express hostility significantly more often than normal child samples, the differences being significant at better than the 1 per cent level of confidence, in some cases at better than the .1 per cent level of confidence.

Comparison between the alcoholics and the hospitalized samples disclosed that they differ significantly in protesting disability, with the hospitalized neurotics displaying this behavior more often than alcoholics in better than 95 times out of 100, and hospitalized psychotics displaying this behavior more often than the alcoholics in better than 98 times out of 100. In the display of hostile overtures, the difference between the alcoholics and the hospitalized psychotics was significant at slightly less than the 5 per cent level of confidence, with the stronger tendency on the side of the psychotics. Alcoholics appear to differ significantly from the hospitalized neurotics in the behavior, *criticism with no change in Story*, the difference being significant at the 5 per cent level of confidence with the neurotics displaying this behavior more often.

In summary, General Behaviors refer to those readily observable and recordable behaviors of the subjects in response to the challenging directions of the 3-DPT Productions. These behaviors reflect the subjects' characteristic styles of response to challenging life situations where defined limits require that ideas, object relationships, and actions be presented in a logical, integrated, goal-directed manner. Tests of significance disclosed that these behaviors are displayed more frequently in normal adult female samples than in normal adult male samples. However, neither normal adult males nor females differed significantly from normal child samples in displaying these behaviors. Further, normal men, women, and children differed significantly from sick samples in the frequency of display of these behaviors. Specifically, alcoholics appeared to be distinguishable from normal samples in the display of striving with no attainment and in the need for 2+ repetitions of directions. Hospitalized neurotics appeared to be significantly different from normal samples in the display of criticism with no change in Story. Hospitalized psychotics appeared to be significantly different from normal samples in their display of need for reassurance, 2+ repetitions of directions, protests of disability, hostile overtures, and striving with no attainment. Hospitalized psychotics appeared to differ from alcoholics in protests of disability and display of hostility, while hospitalized neurotics differed significantly from alcoholics in protests of disability and criticism with no change in Story, the neurotics displaying these behaviors significantly more often than the alcoholics.

The behavior, *Changing the Story* to improve on it, appears to be limited to normal adult samples.

# Chapter VI

# Feeling Tones in 3-DPT Productions

Feeling Tones in 3-DPT Productions refer to those feelings, moods, and urges projected into the Story theme and into the Story objects. These verbalized feelings appear to reflect a subject's characteristic attitude toward himself and related objects (170). The concept, Feeling Tones, is used here rather than "attitudes" or "traits" because it expresses fluidity, dynamics, operations, processes, in contrast to "attitude" or "trait" which suggest static, fixed phenomena. Feeling Tones are actually action urges and as such describe human behavior more adequately than do static concepts, since behavior itself is a process. Feeling Tones as used here are objectively identifiable, for they must be directly verbalized by the subject to be scored. The Feeling Tones as identified here provide objective indices to subjective action urges experienced by the subject.

Feeling Tones are projected into the Story when the subject cannot release unacceptable action urges through adequate action. Under optimal conditions, a subject can express his feelings or action urges through adequate action channels. As the opportunity and ability to express action urges through adequate action channels lessens, the subject attempts to relieve his urges through dependent and defensive behaviors such as described under the variable, General Behaviors. As the dependent or defensive behaviors fail to provide adequate release for these urges to action, the subject appears to resort to verbalized projection of these feelings. Thus the Feeling Tones projected onto object relationships in the 3-DPT Stories appear to reflect the subject's final efforts to channel into the environment urges that he could not release through adequate action or through dependent and defensive behaviors.

Feeling Tones as defined here are not expected to be expressed to any significant degree in 3-DPT Stories by normal adult samples, since the latter are expected to be able to meet the 3-DPT Production task with adequate actions. Normal child samples are expected to be somewhat less able to meet this challenge and so are expected to express Feeling Tones in 3-DPT Stories more freely. Sick subjects have great difficulty meeting the challenge of the 3-DPT Production Task, as evidenced by their widespread use of dependency and defensive behaviors, and are therefore expected to make free use of Feeling Tone projection in the 3-DPT Stories. However, since sick samples differ from each other in the ability to translate various feelings into adequate action, it was expected that sick samples would differ from each other in the expression of particular Feeling Tones, but not necessarily in the frequency of expressing Feeling Tones.

To test these expectancies the data on Feeling Tones were submitted to chi square tests of significance. However, before making intersample comparisons, intrasample performance tests were made on the child sample and normal adult male and female samples to determine whether situational anxiety had any influence on projection of Feeling Tones and whether normal adult men and women differ from each other in the projection of Feeling Tones in 3-DPT Stories.

The Feeling Tones identified in the 3-DPT Stories may be classified as follows:

1. Happy, cheerful, contented, loving, kind.
2. Ashamed, apologizes, atones, reforms, blames self.
3. Afraid, seclusive.
4. Strives, tries, aspires.
5. Restless, nervous, fidgety.
6. Sad, depressed, hopeless, tired, despairing.
7. Mad, angry, hateful, threatening, fighting, criticizing, frustrated.
8. Confused, perplexed, crazy, drunk, jumbled.
9. Indifferent, aloof, self centered.
10. Protective.
11. Ambivalent, inner conflict.

These test results indicate that normal men and normal women are consistent from Prenaming to Postnaming Stories in the degree to which they project Feeling Tones into 3-DPT Stories. Children, on the other hand, appear to project Feeling Tones significantly more often in the Prenaming Story than in the Postnaming Story, specifically, strivings and fear and protectiveness.

The consistency of behavior of normal men and women in Feeling Tones in the Prenaming and Postnaming Stories suggests that situational anxiety roused in the 3-DPT situation does not impair the ability of normal adults to meet the challenge of the task with adequate actions. On the other hand, the very significant decrease in expression of Feeling

Tones and particularly of strivings in the Postnaming stories of the child sample suggests that situational anxiety experienced by the children in the Prenaming Task is strong enough to impair ability to express urges through adequate action. However, these findings also suggest that the anxiety reflected here is only temporary, for it is dissipated by the time the children reach the Postnaming Production.

## INTERGROUP DIFFERENCES

Statistical comparison of the expression of Feeling Tones in records of normal men and women disclosed no significant sex dfferences on this variable. Consequently, the data on the normal men and women for this variable were treated as the normal adult sample. Comparison of the normal adult sample with the other samples shows that the normal adult sample differs significantly from the normal child sample in the expression of fear, striving and anger in the 3-DPT Stories. Since the child sample differs significantly, within itself from Prenaming to Postnaming tasks in this variable, it seems reasonable to assume that the significant differences demonstrated between the normal adult sample and the child sample are weighted by the children's freer use of Feeling Tones in the Prenaming Stories. Tests of significance between normal adult performance and child performance on the Prenaming and Postnaming Productions, tested separately, support this inference with respect to the expression of fear but not with respect to the expression of striving and anger. In other words, children appear to express fear significantly more often than normal adults in the Prenaming Stories, but not in the Postnaming Stories. However, they appear to express strivings and anger in both the Prenaming and the Postnaming Stories significantly more often than normal adults.

These findings suggest that the expression of fear, strivings and anger in both the Prenaming and the Postnaming Stories is within normal limits for child samples such as ours.

The data also reveal that normal adults are significantly different from the sick samples in the expression of Feeling Tones generally, with the alcoholics displaying these more often in 98 times out of 100, and hospitalized neurotics and psychotics displaying them more often in 99.9 times out of 100. Specifically, alcoholics appear to express strivings and sadness significantly more often than normal adults; hospitalized neurotics appear to express fear, striving and ambivalence significantly more often than normal adults; hospitalized psychotics appear to express striving, sadness, anger and confusion significantly more often than do normal adults.

### DIFFERENCES BETWEEN CHILD SAMPLES AND SICK SAMPLES

Since children's samples as well as sick samples differ significantly from normal adults in expressing the Feeling Tones of fears, striving, and anger, tests of significance were run between child sample performance and sick sample performance to see whether any significant differences existed between the child sample and the sick samples in the expression of these Feeling Tones in 3-DPT Stories.

The results indicate that the child sample and the alcoholic sample do not differ significantly in the expression of fear, striving, and anger in the 3-DPT Stories. However, alcoholic samples give significantly greater expression to Feeling Tones than do child samples, expressing sadness more often than children in 99.9 times out of 100, and shame more often in slightly less than 95 times out of 100. In short, although child samples and alcoholic samples express fear, striving, and anger in 3-DPT Stories equally often, alcoholics give much freer expression to Feeling Tones expressing sadness and shame. Furthermore, the child sample does not differ significantly from the neurotic sample in the expression of fear, striving, and anger in 3-DPT Stories. However, variety of Feeling Tones is expressed significantly more often by neurotics than by children in 3-DPT Stories, the difference being significant at the 1 per cent level of confidence. Specifically, neurotics express sadness and ambivalence more often than children in better than 95 and 99 times out of 100, respectively.

Comparing the child sample to the psychotic sample on Feeling Tones, the data indicate that the psychotic sample expresses general Feeling Tones significantly more often than children, the difference being significant at better than the 1 per cent level of confidence. Specifically, hospitalized psychotics express sadness and confusion more often than children, and tend also to express indifference more often than children. On the other hand, children tend to express fear more often than the psychotics and express striving significantly more often than the psychotics. In the expression of anger, the child sample does not differ from the psychotic sample.

### DIFFERENCES BETWEEN SICK SAMPLES

Tests of significance between alcoholics, neurotics and psychotics were run to test the expectation that these sick samples differ on particular Feeling Tones projected into 3-DPT Stories. In the data already presented it appears that the hospitalized neurotics are unique in their projection of ambivalence, the alcoholics in the projection of shame, and the psychotics in the projection of confusion.

The tests indicate that hospitalized neurotics project Feeling Tones into 3-DPT Stories significantly more often than ambulatory alcoholics in better than 95 times out of 100, while hospitalized psychotics do not appear to differ from the alcoholics in the frequency of expression of Feeling Tones in the 3-DPT Stories. Specifically, neurotics appear to express ambivalence significantly more often than alcoholics, and tend to express fear and anger more often than the alcoholics. Psychotics express confusion significantly more often than the alcoholics in better than 99.9 times out of 100, while the alcoholics express strivings significantly more often than the psychotics.

Comparison of hospitalized neurotics with hospitalized psychotics on the projection of Feeling Tones in the 3-DPT Stories discloses that these two sick samples do not differ significantly from each other in the frequency of expression of Feeling Tones. However, they do differ from each other in the projection of particular Feeling Tones. Thus, neurotics appear to project fear and ambivalence significantly more often than the psychotics, better than 98 and 99.9 times out of 100, respectively, while psychotics tend to project confusion more often than neurotics.

In summary, the verbalized expression of Feeling Tones in 3-DPT Stories reflects projection of frustrated action urges into the environment in a safe manner, action urges that the subject was not able to express through adequate action channels. Analysis of Feeling Tones projected into 3-DPT Stories discloses that:

1. Normal adult male and female samples do not differ to any significant degree in the expression of Feeling Tones in 3-DPT Stories.

2. Normal adult samples differ significantly from children's samples in the expression of fear, striving and anger in 3-DPT Stories, with the children's sample projecting these feelings more often than the adults. The verbalization

of fear, striving, and anger in 3-DPT Stories thus appears to be within normal limits for children's samples but not for adult samples. The expression of the Feeling Tones in 3-DPT Stories of adults may be viewed as signs of immaturity.

3. Normal adult and children's samples differ significantly from sick samples in the frequency of projection of Feeling Tones into 3-DPT Stories.

4. Alcoholic samples appear to be distinguishable from normal adult samples in the projection of striving and sadness, and from child samples in the projection of *sadness and shame*. Alcoholic samples appear to give significantly less expression to anger and ambivalence than the hospitalized neurotics; they give greater expression to *striving* and give significantly less expression to confusion than do the hospitalized psychotics.

5. Hospitalized neurotics appear to express fear, striving and *ambivalence* significantly more often than normal adult samples; sadness and *ambivalence* more often than the children's samples; anger and *ambivalence* more often than do the alcoholic samples; and *fear and ambivalence* more often than the hospitalized psychotic samples.

6. Hospitalized psychotic samples appear to express striving, sadness, anger and *confusion* significantly more often than normal adults; sadness, *indifference, and confusion* more often than children's samples; *confusion* more often than alcoholic and hospitalized neurotic samples.

7. Children's samples appear to express fear and striving significantly more often than hospitalized psychotics, but the child sample does not differ from the alcoholic and neurotic samples in the projection of fear and striving. These findings suggest that the expression of fear and striving in 3-DPT Stories by psychotics has positive value.

## Chapter VII

# Unique Treatment Variables in 3-DPT Productions

The Unique Treatment Variables of the 3-DPT forms are identified as follows:

0 First form reacted to.
1 Test forms used in Design.
2 Multiple concepts applied to one test form at one and same time.
3 Test form used as or in Isolate Manipulation.
4 Test forms arbitrarily combined into one concept.
5 Test form(s) identified by opposite characteristics.
6 Test forms indecisively identified (either-or).
7 Test forms used in Building.
8 Test form(s) used in or as an Isolate Idea.
9 Test forms moved.
11 Test forms sorted.
12 Test forms rejected.[1]

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[1] This variable was not treated here due to the limitations of machine treatment. It is treated in content analysis.

The variables Building, Design, Sorting and Movement have already been analyzed in terms of the *Number* of Buildings, Design, Sortings and the *Manner* of Movement used by each tested sample. In this section these four variables are analyzed in terms of the particular test forms used by the different samples in these unique ways, in each production. These four variables are used by all tested subjects to greater or lesser degree.

The variables identified as Multiple Concepts, Arbitrary Combinations, Isolate Manipulations, Isolate Ideas, Opposite Characteristics, and Indecisive Identifications are presented in terms of the frequency of application to the 28 test forms by the tested samples. These six variables are viewed as deviant behaviors reflecting varying degrees of thought disturbance. They are not expected to be used by normal adults.

The variable, Multiple Concepts, i.e., one form is identified by several mutually exclusive concepts at one and the same time, and the variable, Arbitrary Combinations, i.e., test forms are arbitrarily combined and identified as one concept, appear to reflect the most extreme forms of thought disturbance as expressed in the 3-DPT Productions. The variable, Multiple Concepts, is similar to the concept of "ambivalence," as defined by Bleuler (18, p. 55), and to the concept of contamination in the Rorschach. The concept, Arbitrary Combinations, is similar to the concept of "condensation," as defined by Bleuler (18, p. 25, 75).

The variables, Isolate Ideas and Isolate Manipulations, appear to reflect a subject's response to the test form(s) which touches off (stimulates) ideas and urges that are unbearable to the subject and so are cut off from the main stream of conscious thought. These two isolate variables are similar to the concept of "blocking," as defined by Bleuler

(18, pp. 34-35), and like "blocking" appear to disclose important complexes in the subject. These isolate behaviors are rare in normal adults; however, clinical experience with the 3-DPT indicates that they appear in children's samples. These isolate behaviors are not as pathological as are the behaviors, Multiple Concepts and Arbitrary Combinations.

The variable, Opposite Characteristics, projected onto two separate forms or onto different parts of one form, and the variable Indecisive Identification, where two or more concepts are projected onto a test form in an either-or relationship, appear to reflect conflicting ideas and urges which the subject is unable to resolve. However, in contrast to Multiple Concepts and Bleuler's concept of ambivalence, the subject giving the either-or concept is aware of his conflict and is aware that the concepts are mutually exclusive. The variables, Opposite Characteristics and Indecisive Identification in the 3-DPT Productions, are similar to Piotrowski's "blocked M" in the Rorschach which Piotrowski considers as signs of "doubt neurosis [170, p. 77]." Clinical experience with the 3-DPT suggests that these two conflict variables predominate in the records of neurotic subjects. When they are present in records of psychotics, they appear to reflect a favorable prognosis.

The variable, *First Form Reacted To,* is different from the other variables in this section because it is generally applicable to one form of the set and is common to all the tested subjects. This variable was included here with the expectation that it would provide a simple index to the stimulus values of the 3-DPT forms.

## SYMBOLIC SIGNIFICANCE OF 3-DPT FORMS

Before presenting the analysis of the data on the Unique Treatment of the 3-DPT forms, the test forms are introduced here in terms of their structural characteristics and their symbolic significance for behavior.

The hypotheses relative to the symbolic significance of the test forms for human behavior were developed over a period of 8 years during which the writer personally tested about 1000 subjects ranging in age from 3 years to 81 years. Insights derived were validated through periodic exchange of ideas with colleagues, through spontaneous explanations by subjects tested of the significance of test forms used by the subjects, and by correspondence of the Production Stories with case history material.

The test forms are identified here by the numbers assigned them by the author of the test forms (230).

### TEST FORMS #1, #2, #3, #4, #5, #6, #7, #8, #9

These nine test forms are geometric in structure and as such they represent man-made objects rather than natural objects. They are structured so as to be readily incorporated into architectural construction, i.e., Building and Design. These test forms also lend readily themselves to sorting or classification.

### TEST FORMS #1 AND #2

Test forms #1 and #2 differ from the other geometric forms in shape, i.e., they are the only geometric forms that are rectangular in shape. Test forms #1 and #2 differ from each other in length, breadth, depth, and weight, with test form #1 being the larger and heavier. Test form #1 appears to tap the aggressive urges to action in the personality. Test form #2 appears to reinforce the dynamics touched off by test form #1.

Whether the aggressions are used constructively or destructively by the subject is determined by the manner in which these test forms are used in the 3-DPT Productions. Thus, when test form #1 and/or #2 are used in architectural constructions (Building or Design), they appear to represent efforts toward constructive use of aggressive impulses. When they are identified as geometric forms, they represent efforts on the part of the subject to inhibit aggressive urges by denial. When they are used as Isolate Manipulations or Ideas and/or when they are used in an isolate or desolate setting, and/or when the content projected onto them has aggressive and/or destructive significance, then these test forms represent urges toward destructive use of aggressive impulses.

Evidence of the destructive significance of test forms #1 and #2 was derived from records of subjects who had attempted suicide and from subjects who finally did commit suicide some time after having been tested. In each of the three successful suicides test form #1 was used in the Production in an isolate setting. In all three cases test forms #1 and #2 were identified in the Naming Test by aggressive content, "honing stones." In two records of the attempted suicides, test forms #1 and #2 were used as isolate manipulations and ideas. In one record of attempted suicide and infant murder, test forms #1 and #2 were used in isolate settings as, "tombstones of a parent" (#1) and "a child" (#2). In the Naming Test these three subjects identified test forms #1 and #2 as "bars of soap," reflecting guilt feelings.

In the record of a paranoid schizophrenic woman, 41 years old (married to a man 20 years older than herself), who had attempted to choke her dog, test form #1 was used in the Postnaming Production as, "the grave of a pet or someone of them who had been killed." In the Naming Test, in this same record, test forms #1 and #2 were identified as "bars of soap," reflecting (as indicated above) guilt feelings. It is worth noting at this point that test form #10 also appears to represent aggressive, destructive urges when it is identified as a "coil of rope" in a production, either as an Isolate Manipulation or Idea. The paranoid schizophrenic woman, referred to above, identified #10 in her Prenaming Production as a "snake who killed the man or someone," and when her Story was over she said, "You could make that a coil of rope instead of a snake." In her Postnaming Production she used #10 again as a "snake that might have killed the pet or someone," while in the Naming Test she identified it as, "snake or something, you know that feeling of great bands encircling and choking you."

Evidence reflecting the constructive significance of test form #1 is provided in the behavior of a 37-year-old male anxiety neurotic who used test form #1 as a "table on which mother had set lunch for the little boy" (Prenaming Production), reflecting an effort to use his aggressive urges constructively. When the session was over he said, as he held test form #1 in his hand: "It's funny the sort of ideas that come to one as one looks at these forms, this one really makes me think of my fear of committing suicide – you know, I don't dare take a day off from work and stay alone in the house because when I'm alone I'm tempted to do away with myself." He went on to elaborate the various means he had considered for self-destruction.

Another example that supports the hypothesis that test forms #1 and #2 reflect aggressions and that, when used in architectural structures, reflect efforts to express aggressions constructively, is provided in the production of a very superior professional person who used these test forms as part of a Design to represent the architecture of a country at war with a small country for which he had great sympathy. He developed a Story reflecting the relative strengths of the countries. When the Story was finished, he said with great surprise: "Do you know what this means to me? It represents my frustrations at being helpless to stop the aggressions of this large country against this small country. I must make a larger financial contribution to this small country's efforts to protect itself."

### TEST FORMS #3 AND #4

These test forms appear to derive their significance from the content projected onto them and/or from the test forms to which they are related. Test form #3, a solid cube, appears to represent efforts at expressing aggressive male urges in a socially acceptable way while test form #4, a solid triangular form, appears to represent efforts at expressing passive female urges in a socially acceptable manner. When these test forms are used in architectural constructions they represent levels of socially acceptable adjustment. When they are identified as food, they represent immature social adjustment. When they are identified as geometric forms, they represent social anxiety with efforts to mask the anxiety by maintaining aloof intellectual relationships.

### TEST FORMS #5, #6, AND #7

These test forms all have phallic structure and as such appear to reflect a subject's attitudes toward male sexuality. Test forms #5 and #6 appear to represent attitudes toward adult male sexuality, while test form #7 appears to reflect attitudes toward childhood male sexuality. When these three test forms are identified as solids, they reflect aggressive, virile male sexuality and when they are identified as hollow objects, they appear to reflect passive, dependent male sexuality. The contents projected onto these test forms and the manner in which they are manipulated, as well as the test forms to which they are related in the Production, provide additional clues to the attitudes of the subject toward male sexuality.

### TEST FORMS #8 AND #9

Test forms #8 and #9, like test forms #3 and #4, appear to derive their significance from the content projected onto them and from the forms to which they are related, as well as from the manner in which they are manipulated. Thus, when they are related to test form #7, they reinforce attitudes toward childhood male sexuality. A deteriorated paranoid schizophrenic woman, 45 years of age, identified test forms #8, #7 and #9, in combination as, "the baby's penis when it's been rubbed." Another paranoid schizophrenic woman, 41 years of age, giggled as she pointed to these three test forms at the end of her Prenaming Production and said: "this [#7] looks like a pyramid but the way they are arranged here it makes me think of the penis [touching #7] and these [touching #8 and #9] look like the testicles."

### TEST FORM #10

Test form #10, a circular form of molded strands, appears to symbolize adult female sexuality. The manner in which this form is identified, is related to other forms, and/or is manipulated will determine whether adult female sexuality is viewed or expressed constructively or destructively, in socially acceptable ways or unacceptable ways, is sublimated, denied, repressed or suppressed. For example, a young man of 21 years, unmarried, from the general population, incorporated #10 in a Story, identifying #10 as a "coiled snake dozing near a young man as he slept in his sleeping bag." This use of test form #10 reflects socially acceptable attitudes or action urges toward adult female sexuality. He views adult female sexuality as passive, dependent, but potentially vital. A young paranoid schizophrenic male identified #10 as a "snake coiling itself around his little finger" and dramatized this action by trying to swing #10 around #7. Here test form #10 represents adult female sexuality as aggressive-destructive in a socially acceptable manner, that is, the adult female "smothers" rather than mothers. "Smother love" is a socially acceptable technique for expressing aggressive female sexuality.

A paranoid schizophrenic woman, 35 years of age, identified #10 as a "dangerous coiled snake ready to pounce upon a man [not represented by a test form] who was trying to kill the snake with his knife [#7]." She dramatized this act by hitting #10 with #7. Here adult female sexuality is seen as aggressive, destructive, and warranting punishment. This young woman was sexually promiscuous and she repeatedly attempted suicide by nicking her wrists with a razor blade.

A young married woman suffering a postpartum neurosis (she had attempted suicide) identified #10 as a "hooked rug on the living room floor." Here adult female sexuality is seen as a passive, inert object to be used for display purposes and for the comfort of others. When #10 is identified as food, an identification common to alcoholics, it suggests that adult female sexuality is viewed as an object to be used for oral indulgence and gratification.

### TEST FORM #11

Test form #11 like test form #10 appears to reflect attitudes toward female sexuality. However, #11 appears to reflect immature female sexuality while #10 reflects adult female sexuality. The essential features of test form #11 are its passive, resistive qualities in contrast to the active, vital characteristics of test form #10. The manner in which test form #11 is used in the Production, the content projected onto it, and the manner in which it is manipulated will reveal whether immature female sexuality is expressed in a socially acceptable way, in a stealthy, furtive evasive way, or in an aggressive way. Socially acceptable attitudes toward immature female sexuality are seen in a Production by a 41-year-old male anxiety neurotic who identified #11 as, "a sandwich in a lunch box being served by mother to a schoolboy." Here the mother is seen as nurturing the "schoolboy." Denial of nurture and rejection may also be expressed in a socially acceptable way, as reflected in the Production given by a male paranoid schizophrenic of 20 who used #11 in combination with #14 and identified these two forms as, "a clam with human intelligence." At the end of his Production he confided to the examiner that his father had deserted his mother because his mother was niggardly and stingy. Immature female sexuality expressed in a furtive evasive manner is reflected in the Story of an alcoholic man of 45 years who used #11 as, "an apple turnover in a baker's window which was stolen by a young boy." Niggardly nurture expressed furtively is reflected in the Story of an alcoholic man of 35 years who used #11 as, "an outhouse in an otherwise luxurious home." This young man confided to the examiner that his mother really loved him but could not show it openly because his stepfather was jealous. He explained that his mother had sent him to live with his grandparents when she remarried and that she would write to him often but would visit him only occasionally when his stepfather was away on a business trip.

### TEST FORM #12

Test form #12 is a large, gently molded figure that appears to have human female qualities. This test form appears to reflect attitudes toward the adult female social role, i.e., the wife and mother roles. When #12 is used in a Story as a "mother serving lunch to the schoolboy," as given by a 41-year-old male anxiety neurotic, it is apparent that the mother figure is seen as nurturing and indulgent. When #12 is seen as a "big mountain on which the monkey [#17] climbs," as given by a 12-year-old girl, it suggests that the mother figure is seen as strong, protective and patient, yet firm and authoritative. When #12 is seen as, "a woman in a shawl, cold, aloof, self-centered," as given by a 39-year-old neurotic woman, the interpretation that the mother is seen as self-centered, aloof, cold, and rejecting is obvious. When #12 is placed on a block form such as on #1, #2, #3, or #5, and is called, "a statue of the Madonna on a pedestal," as given by an alcoholic man of 29 years, it reflects unbearable feelings about the mother figure, feelings that are masked by virtuous, respectful protests. In this use of #12, the mother figure is actually seen as cold, indifferent, aloof, unattainable, unreachable. This young man had not seen his mother since he was 8 years old when she had deserted him and his father for another man.

### TEST FORM #13

This is an irregular form that appears to symbolize undifferentiated sexuality. The manner in which it is used in a Production, both content and manipulations, will reveal whether the subject is making a passive, dependent adjustment, an aggressive adjustment, or is suffering from ambivalence in sexual identity. When #13 is used in a Production as a "throne," it appears to represent grandiose strivings in a passive-dependent, resistive adjustment. When #13 is used as an "alligator with his mouth open," it appears to represent an oral-aggressive adjustment. Ambivalence in adjustment is reflected in the use of #13 as, "a shoe or the last upon which the shoe fits," as used in a Production by an anxiety neurotic woman of 44 years.

### TEST FORM #14

This is a simple concave form and appears to symbolize fertility, the nurturing and childbearing role of the adult female. The manner in which this form is used in the Productions, both content and manipulations, reflects the subjects' attitudes toward the nurturing, protective, supporting role of the mother figure. When test form #14 is used in a Production as, "the cradle of baby Jesus," as told by a 28-year-old paranoid schizophrenic woman, it reflects grandiose fantasy gratifications of intense nurture and dependency needs, needs that the subject had apparently been denied in early infancy. Case history reveals that this young woman had been orphaned at the age of two by an automobile accident in which both parents were killed. She inherited a substantial fortune and grew up in a series of exclusive boarding schools.

A 26-year-old catatonic schizophrenic unmarried woman used #14 as a "sofa in the garden where husband and wife are seated." This use of #14 suggests that the mother figure is seen as mother earth, not only nurturing the infants, but also nurturing the grownups. This young woman was sister to four older brothers, all of whom were married. Her parents had died within the five years preceding her hospitalization. She broke down when the family home was being sold. Her intense need for the protective, nurturing mother figure is apparent in her Story. It is noteworthy that this young woman said to the examiner, after the Prenaming Production, "I know that you must be lucky, you are married, I see your ring."

The use of test form #14 as "an old, ugly man with big ears," as given by a 45-year-old neurotic man, reflects attitudes of hostility, fear and suspicion toward an aggressive, controlling mother figure. The case history of this man verifies these attitudes toward his mother. Anxiety in relation to the childbearing and nurturing roles of the female are reflected in the use of #14 as a "pelvic girdle in the doctor's office being operated upon," as offered by a compulsive neurotic man of 21 with intense homosexual urges. Forbidden sex urges for the nurturing mother figure appear to be reflected in the use of #14 as, "a fireplace in the living room," offered by an alcoholic man of 32 years with intense homosexual urges. Rejection by and disdain for the nurturturing female is reflected in the use of #14 as, "an ashtray with cigarette butts [#24 and #25] standing on the table in the living room," as offered by this same alcoholic man in his second Production.

### TEST FORM #15

This is a very simple form, much like that of berries or pebbles. This test form, when used in a Production, appears to reflect attitudes toward female genitalia. Evidence of masturbation and other forms of infantile sex play, as well as the manner in which contact affection is gratified, are often disclosed by the way in which test form #15 is used in the Production. Excessive masturbation from early childhood is reflected in the use of #15 in a Production of a 41-year-old paranoid schizophrenic woman who used it as, "a smooth rock near the shore [#19], far from the house

[#20], worn down by constant water pressure." Hostility against female genitalia is reflected in the use of #15 as a "rotten peach," as offered by an alcoholic man of 32, suffering intense homosexual urges. When #15 is used as a "peach on the table with a bite taken out of it," as offered by a 38-year-old neurotic man, it appears to reflect early childhood sex play. Case history material verifies this interpretation, for this young man had reported having indulged in sex play in childhood with his sister who is two years older than him.

### TEST FORM #16

This is a tall, graceful, complex form with flowing lines intricately interwoven. It is a "living" form in essence and appears to reflect the subject's attitudes toward heterosexuality. When used as a "ship's anchor" in a Production, as given by a 45-year-old alcoholic man, it reflects a passive-dependent relationship in marriage. When seen as "metal coils wound tightly around a pole," as offered by a 29-year-old alcoholic man, it reflects fear of heterosexuality with a passive-dependent adjustment developed to mask fear of and hostility toward the female in the heterosexual relationship. When seen as a "graceful woman in evening coat and elaborate headdress," as given by a cultured married woman of 40, it reflects mature acceptance of heterosexuality with pride in female sexuality. When #16 is used as a "tree with clinging vines growing around it," it reflects a clinging dependent female role in heterosexuality protected by a virile male role. When the "vines are choking off the life of the tree," then the passive-dependent partner in the relationship is controlling and destructive. Test form #16 was used in the latter manner by a 29-year-old male alcoholic who, through his pervasive passivity, forced his wife to support their little family of three children and kept the wife at work up to the day each baby was due to arrive. At the time of testing his "wife was expecting a fourth baby at any moment," yet she was still working. At end of testing the patient expressed mild anxiety about his wife's welfare.

### TEST FORM #17

This form is small and complex and appears to embody the essence of a little "animal." It appears to reflect the subject's attitude toward the childhood self. The manner in which test form #17 is used in the Productions reflects the subject's attitudes toward the childhood self sex role, social role, and age role, or status among siblings and peers and/or role in relation to the parents. When test form #17 is used in a Production as "a pet monkey watching his master [#21] work," as given by a 46-year-old neurotic, it reflects an infantile undifferentiated self concept, a passive, dependent adjustment in response to an overprotective, exhibitionistic, productive father figure. When #17 is identified in a Production as a "sad weeping woman," as given by a 41-year-old paranoid schizophrenic woman, it reflects an adult female self-concept during childhood. When #17 is used in a Production as "symbolic of the children in the country," as given by a cultured woman of 40, it reflects acceptance of the childhood self as a member of a large family, acceptance of siblings, peers, parents and society. This woman is the middle of seven siblings in a family of upper socioeconomic level.

At times, through the use of test form #17 in a Production, a subject reveals an identification with one of his own children, projecting onto the child his own childhood self concept. This treatment was offered by a 49-year-old neurotic man who used #17 in the Prenaming Production as a "child being punished for not coming home on time" and then laughingly said, "You know, I used to be scolded for that reason and now I have to scold my second son for the same reason."

### TEST FORM #18

Test form #18 is a simple nature form much like the early undifferentiated foetal stage of an organism and like the form of a legume, or a potato. When used in a Production, it appears to reflect the subject's attitudes toward fertility, pregnancy, the foetus, the creature in need of nurture, and the birth process. A dramatic example of the symbolic significance of test form #18 is seen in the use of this form as a "withered, decaying creature," given by a paranoid schizophrenic woman of 41. This woman had had three abortions and one stillbirth. In the Prenaming Production she called it, "a potato on grandpa's farm," but in the Naming Test she grasped test form #18 and called it, "my withered creature." Another dramatic verification of the symbolic significance of test form #18 as used in a Production is seen in its use as "the expected baby [#18] is in the living room with the mother [#12] and father [#21]."

### TEST FORM #19

Test form #19 is a large, irregular though gracefully molded form that appears to reflect a subject's social self concept when used in a Production. The subject may see the self as protective and supportive; dangerous and threatening; creative and dynamic; isolate, superior, powerful; resistive and stubborn; downtrodden. When #19 is used in a Production as, "the shoe house where the old lady lived who had so many children," as given by a 40-year-old married woman of means, it reflects feelings of responsibility and protectiveness toward others. This woman is outstanding in her community as a volunteer worker who gives freely of her time, energy and money. She also is very protective of her siblings and their offspring, and gives to them unstintingly even as she chides and scolds them. When #19 is is used in a Production as a "goat standing at the top of a mountain guarding the baby goats," as offered by a 37-year-old woman executive in the Postnaming Story, it reflects feelings of superior isolation even as she stubbornly assumes responsibility for her weaker siblings and parents. When #19 is used as a "tiger standing on a mountaintop ready to spring," as given by a paranoid schizophrenic man of 25 who had attacked his mother with a carving knife, it reflects grandiose virility and power held in check by isolation and withdrawal but ever watchful and ready for aggressive action at the slightest provocation.

When #19 is used in a Production as a "seals' playground like they have in Central Park," as given by a 26-year-old male alcoholic, it reflects an exhibitionistic, playfully protective role, masking unacceptable feelings of weakness and dependency.

### TEST FORM #20

This form is an irregular, complex structure that embodies the essence of simple natural life, animal or human life, and architectural form. It appears to reflect the subject's attitudes toward and his role in his childhood home. The feelings deriving from the childhood home and relationships are often telescoped onto the adult home situation of the subject being tested, so that projections onto test form #20 in a Production often reveal not only the subject's conception of self in his childhood home relationships, but also his conception of his role in his present home relationships. When test form #20 is used in a Production as, "a child reaching up to the messy table for food," as used in a Story by a 35-year-old neurotic woman, it reflects her hostility toward her mother in childhood, her feeling of rejection by a niggardly mother, and at the same time it reflects her hostility toward herself in relation to her own child and her guilt about her hostility to her own child. Verification of this interpretation is found in the affective remarks made by this woman when the testing was over. She expressed "hatred" of housework and marital responsibilities and "disgust" at the need to "wash dirty diapers full of feces" and "impatience" at the need to "constantly feed the child." At the same time she expressed guilt about her "screaming at the child and hitting him even when he just wanted something to eat." She went on bitterly about her mother who was such a poor housekeeper and was so interested in herself and her social life that she never had time to clean the house and prepare decent meals for the family.

When test form #20 is used in a Story as a "tombstone with my mother's initials on it and with bird droppings," as given by a 23-year-old paranoid schizophrenic man, it reflects violent hostility toward a niggardly mother. Case history reveals that this young man lost his father when he was 8 years old and that he and his mother went to live with the maternal grandmother and uncle.

The 41-year-old paranoid schizophrenic woman, referred to previously, used #20 in her Prenaming Production as "the tombstone and they all died." Here the subject reveals violent hostility toward her childhood family as well as toward her present family constellation. When test form #20 is used in a Story as, "a little boy hiding behind a rock and peeking over to see what his parents are doing," as given by an alcoholic man of 24, it reflects feelings of solitude and fear with furtive visual aggressions toward his parents.

When test form #20 is used as a "volcano that had erupted and now is covered with streams of lava and ashes," as given by a brilliant male executive of 55, an alcoholic, it reflects shock at having witnessed the primal act in childhood. Case history reveals that his mother carried on an illicit love affair in the home while the father was away on business. When test form #20 is used as a "mountain on which are huddled a mother bear and her cubs," as given by a 37-year-old female executive, it reflects a protective role toward the siblings and parents, with sympathy, yet with disdain for their inadequacies. This young woman is the eldest of eight siblings and has been the sole support of the family since she was 16 years old. Her father had been an alcoholic for years and was unable to provide adequately for the needs of the family.

### TEST FORM #21

This is a "grossly structured form" male-human in essence. It appears to reveal the subject's attitudes toward the male authority figure, his social and productive role, as well as his role in relation to the family members and society. Telescoping of childhood attitudes onto the present may occur with the use of test form #21 as with the other "human" forms, so that test form #21 may reflect the male subject's adult self concept or the female's concept of the husband or other closely related contemporary male. When test form #21 is seen as "an athlete exercising on a lawn," as given by an alcoholic man of 39, it reflects an attitude of awe and admiration for the father figure's prowess, implying that the subject assumes the weak, dependent, inadequate role in relation to the father figure, even as he fantasies himself a powerful, virile, male hero. Exhibitionistic urges and homosexual interests are also implied in this use of test form #21.

When test form #21 is seen as an "elderly man playing a guitar," as given by a cultured woman of 40, it reflects an accepting, admiring attitude toward the male adult who is seen as cultured and sensitive. When test form #21 is used as an "old man, misshapen with a bent back from carrying a heavy load," as used by an alcoholic man of 29 years, it reflects feelings of sympathy toward the male authority who is seen as old and tired out by work and troubles. At the same time it reflects the subject's personal adult self concept, namely, that he feels old, tired and worn out from carrying a great burden. Case history reveals that this young man was brought up by his paternal grandfather after his mother had run off with a stranger and his father was unable to provide adequately for his care. This 29-year-old man is married, has three children, but has not worked for several years explaining that, "I get tired easily, I like to stay home, drink beer, smoke, look at TV and take naps."

When test form #21 is used as a "nice big bear" or a "tame gorilla" in a Story, as used by a 7-year-old boy in each Production, it reflects feelings of awe of the male authority yet feelings of acceptance and understanding by the male authority. In contrast, when test form #21 is seen as "a charging gorilla," as offered by a 15-year-old boy, it reflects terror of a powerful, threatening, punishing father figure or male authority. When test form #21 is seen as "Atlas carrying the world [#8] on his back," as used in a Production by a 60-year-old woman suffering from involutional depression, it reflects awe and admiration of a powerful, productive, supportive male authority and implies a pervasive dependency in the female.

### TEST FORMS #22, #23, #24, #25

These are simple forms, somewhat phallic in shape. The significance of these forms is determined in great measure by the manner in which they are used in a Production, both ideationally and manipulatively. For example, when these test forms are used as "logs of wood for the fireplace," as offered by a 33-year-old compulsive neurotic man, they reflect furtive sexual urges. When used as, "old bones dug up in the ruins of an old city," as given by a 63-year-old male alcoholic, they reflect feelings of sexual inadequacy with depression over long-lost virility.

### TEST FORMS #26, #27, #28

These are minute test forms and generally appear to reflect a subject's attitudes toward trivia. The degree to which a subject elaborates upon these minute forms reflects his degree of security. Preoccupation with these forms reflects intense insecurity with a consequent need for exact, precise structuring of time, space and energy. Extreme preoccupation with the small forms reflects withdrawal from reality. Thus, when test forms #26, #27 and #28 are used as pebbles or seashells on the beach or driveway, as they are often used in a Production, they reflect a realistic attitude toward trivia. When they are used as "children," as in a story by a 23-year-old female catatonic schizophrenic, just married, it reflects terror of marital responsibility with escape from responsibility into utter dependency and fantasy. When test forms #26, #27 and #28 are used in a Story as, "loaves of bread, cakes and rolls," as offered by a 42-year-old alcoholic woman, they reflect excessive preoccupation with trivia due to intense insecurity stemming from intense oral nurture needs.

In general, the symbolic significance of the 3-DPT forms in a Production derives from the structural characteristics of the test forms, amplified by the ideation and Manipulation Constructions elicited by and projected onto the test forms by the subject.

## STIMULUS VALUES OF 3-DPT FORMS

It is expected that the complexity and the size of the test forms in great measure determine their stimulus values. Thus the five test forms that are "human" in essence, namely, #21, #12, #16, #20 and #17 which are the most complex forms and, except for #17, are of large proportions, are expected to have the highest stimulus potency of all the test forms, for all samples tested. However, it is also expected that the different samples will use the various test forms in different proportions, since it is already established that the different samples differ significantly from each other in the mean number of test forms used in each Production.

To determine the stimulus values of the test forms, the data on the frequency of use of each test form by the total tested population combined are arranged in rank order. To determine the stimulus values of the test forms for each sample tested, the data on the first form reacted to are arranged in rank order of frequency for each sample. The frequencies of use of each test form by each sample are tested for significance of the differences between the samples to determine what differences exist between the samples in the use of each test form. The frequencies of usage of each test form are then arranged in rank order percentages for each sample to determine whether the test forms having the highest stimulus value, as measured by the frequencies of use in the total tested population and as measured by the frequencies of first form reacted to, maintain their position when measured by the rank order of usage in each sample.

### TOP SEVEN POPULAR TEST FORMS

Rank order frequency of test forms *used* in the total tested population reveals that the five "human" test forms and test forms #1 and #10 fall into the top seven usage ranks in the Prenaming Production. In the Postnaming Production, the "human" test forms, #21, #12, #17 and #20, plus test form #1, fall within the top seven usage ranks while test forms #16 and #10 fall somewhat below the seventh rank in usage. The dilution of the stimulus values of the test forms in the Postnaming Production is affected both by the general reduction in frequency of use of each of the five "human" test forms and the increase or consistency in usage of the geometric test forms from the Prenaming to the Postnaming Productions. The flattening out of the differences in the frequency of use of the test forms in the Postnaming Production may be accounted for by the anxiety of subjects due to the impact of the ideas and urges roused in the subjects during the Prenaming and Naming tests.

### FIRST TEST FORM REACTED TO

Analysis of the data on the variable, first form reacted to in the Prenaming Production reveals that test forms #21, #12, #16, #20 and #17 fall within the first five ranks in all the samples tested. However, test form #10 ties for second rank in the child sample; test form #1 ties for third rank in the alcoholic and neurotic samples, while test forms #1 and #10 tie for third rank in the psychotic sample. Since the "human" forms are most complex and #1 and #10 are among the larger test forms, these results suggest that size and/or complexity of the test form determine in great measure its stimulus potency. These data indicate further that the five "human" test forms and test forms #1 and #10 have the highest stimulus potency of all the test forms in the Prenaming Production.

Analysis of the data on the variable, First Form Reacted To in the different samples in the Postnaming Productions reveals that the five "human" test forms and test forms #1 and #10 are not distinguishable from the other test forms in stimulus value. This blurring of the stimulus potency of the test forms in the Postnaming Production may be accounted for by the impact of the ideation and affect roused in the subjects during the Prenaming and Naming tasks. These results support the findings on stimulus value of test forms as determined by rank order of frequency of usage in the total tested population.

### FREQUENCY OF USAGE OF INDIVIDUAL TEST FORMS BY EACH SAMPLE

It has already been reported that normal adults and children do not differ from each other in the mean number of test forms used in the Prenaming Production but they do differ in the mean number of test forms used in the Postnaming Production, with children using significantly fewer test forms than normal adults in the Postnaming Production. It was also reported that sick samples use a greater mean number of test forms than the normal samples, both in the Prenaming and Postnaming Productions. These differences raise the question: "In the use of which particular test forms do the samples differ from each other?"

Analysis of the frequency of usage of the individual test forms reveals that the five samples differ significantly from each other in the Prenaming Production in the use of 61% of the 28 test forms, namely, test forms #1, #3, #5, #7, #8, #9, #12, #16, #17, #19, #20, #21, #22, #23, #24, #25, #26 and #27, and they do not differ from each other to any significant degree in the use of the other 39% of the test forms, namely, #2, #4, #6, #10, #13, #14, #15, #18, #20 and #28. In the Postnaming Productions, the samples differ from each other in the frequency of use of all test forms except test forms #10, #11 and #14. The direction of the differences from sample to sample may be seen by examination of the rank order percentages of the test forms for each sample (Tables 30 and 31).

Comparison of the rank order usage of the five "human" test forms (#21, #12, #16, #20 and #17) reveals that these fall within the seven top frequencies for all samples but the psychotics, among whom test form #20 falls below the first seven percentage ranks. The consistency with which these five test forms fall in the top seven frequencies in the tested samples in the Prenaming Productions supports the results obtained from analysis of the data on First Form Reacted To, namely, that the five "human" test forms have the highest stimulus value for all samples tested in the Prenaming Production. It is noteworthy that among children and neurotics the stimulus value of #17 is somewhat diluted by a matching test form and, among psychotics, is substantially diluted by a series of matching test forms. It is further noteworthy that test forms #1 and #10 have high stimulus potency in all samples in the Prenaming Production as measured both by the rank order of First Form Reacted To and rank order of Frequency of Usage.

In the Postnaming Production the five "human" test forms still maintain their position in the seven top ranks for

## TABLE 30

### PRENAMING RANK ORDER PERCENTAGES OF TEST FORMS USED MOST FREQUENTLY BY NORMAL ADULTS, CHILDREN, ALCOHOLICS, NEUROTICS AND PSYCHOTICS

| % | Normal Adults (55) | Children (86) | Alcoholics (31) | Neurotics (17) | Psychotics (33) |
|---|---|---|---|---|---|
| | Test Forms | | | | |
| 80 | — | — | 12 | 21 | — |
| 78 | — | — | 21 | 12 | — |
| 76 | 21 | — | — | — | — |
| 74 | — | — | — | — | — |
| 72 | — | — | — | — | — |
| 70 | — | — | — | — | — |
| 68 | — | — | — | — | 12 |
| 66 | — | — | — | — | — |
| 64 | — | — | — | — | — |
| 62 | — | — | 16 | — | — |
| 60 | — | — | — | 16 | — |
| 58 | — | — | 20 | — | 21 |
| 56 | — | 21 | — | — | 16 |
| 54 | 16 | — | — | 10 | — |
| 52 | — | — | 17 | — | 3, 5, 22, 23 |
| 50 | 12 | — | 19 | — | 1, 17, 9 |
| 48 | | — | — | — | 10 |
| 46 | 17 | — | 1, 22 | — | 7 |
| 44 | — | — | — | 17, 9 | — |
| 42 | — | — | 2 | 20 | — |
| 40 | — | — | 3, 23 | — | 8, 14 |
| 38 | — | — | 5 | — | — |
| 36 | 20 | — | 4, 24, 25, 26 | — | 20 |
| 34 | 14 | 10 | — | — | 6 |
| 32 | 10 | 16 | 7, 27, 28 | 7 | — |
| 30 | 23, 1 | 12 | 8, 9 | — | 4 |
| 28 | 2 | 20 | — | — | 2, 13, 19, 24, 25 |
| 26 | 22 | 7, 1 | 23 | — | — |
| 24 | — | 17, 3 | 13 | 5, 19, 22, 23 | — |
| 22 | — | 6, 8, 9, 14 | — | 24 | 18, 26, 27 |
| 20 | — | 2, 4, 5 | 14 | — | — |
| Total: | 11 forms | 16 forms | 24 forms | 13 forms | 24 forms |

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° The N for the child sample is doubled by combining the data from the precamp and postcamp testing of each child. Chi square tests of significance on the two separate testings disclosed no significant differences in the frequency of use of the test forms by the child sample.

TABLE 31
Postnaming Rank Order Percentages of Test Forms Used Most Frequently by Normal Adults, Children, Alcoholics, Neurotics and Psychotics

| % | Normal Adults (55) | Children (86) | Alcoholics (31) | Neurotics (17) | Psychotics (33) |
|---|---|---|---|---|---|
| | Test Forms | | | | |
| 60 | — | — | — | — | — |
| 58 | — | — | 1 | — | — |
| 56 | — | — | 21 | — | — |
| 54 | — | — | — | 17 | 21 |
| 52 | — | — | 2, 12 | — | — |
| 50 | 21 | — | — | — | — |
| 48 | — | — | — | 1 | 12 |
| 46 | — | — | — | — | 13, 17 |
| 44 | — | — | — | — | — |
| 42 | — | — | 5 | 2, 6, 21 | 1, 16 |
| 40 | 6 | — | 20 | — | 20 |
| 38 | — | — | — | — | — |
| 36 | 3, 5, 12, 17, 19 | — | 8, 13, 16 | 5, 20 | 2, 3, 4, 5<br>6, 8, 10,<br>19, 22 |
| 34 | — | — | — | — | |
| 32 | 20 | — | 3, 4, 6 | — | 9 |
| 30 | 16 | — | 9, 10, 14, 24 | 3, 4, 7, 8,<br>12, 13 | — |
| 28 | 1, 7 | — | — | — | 23, 26, 27 |
| 26 | 10 | 17 | 8, 23, 25 | — | — |
| 24 | 4 | 21 | 27, 11, 28 | 16, 19 | 7, 14, 15, 18,<br>24, 25, 28 |
| 22 | 8, 13 | 10, 12 | 19, 26 | — | — |
| 20 | — | 20 | 15, 17, 22 | — | 11 |
| Total: | 15 forms | 5 forms | 27 forms | 15 forms | 28 forms |

normal adults, children (except test form #16) and psychotics. However, the stimulus values of these test forms in all samples are substantially diluted by the matching frequencies of usage of other test forms. The dilution of the test form potencies is especially marked among the alcoholics and the psychotics. The dilution of the stimulus potency of the test forms in the Postnaming Production, as measured by the Rank Order of Frequency of Usage of the Test Forms, supports the results obtained by analysis of the rank order of test forms in terms of frequency of First Form Reacted To. In other words, both measures of stimulus potency of test forms indicate that the stimulus potencies of the test forms are blurred in the Postnaming Productions, while in the Prenaming Productions Test forms #21, #12, #16, #20, #17, #1 and #10 have the highest stimulus potency for all samples tested.

## FREQUENCIES OF 3-DPT FORMS USED IN DESIGN, BUILDING, MOVEMENT AND SORTING

Design, Building, Movement and Sorting of test forms in Productions are used to greater or lesser degree by all samples tested. It was reported earlier that normal adult samples differ significantly from child and sick samples in the *Number of Designs, Number of Buildings, Number of Sortings* and *Manner of Movement* of test forms in Productions. These demonstrated differences between the *Number of Designs, Number of Buildings, Number of Sortings* and *Type of Movements of test forms* used in Productions are functions of the samples tested. On the other hand, when the samples are compared in terms of frequencies of individual test forms used in Design, Sorting, Movement and Building, differences in stimulus value of the structural characteristics of the various test forms are revealed as well as differences in functions of the samples tested.

Although the variables Design, Building, Sorting and Movement, as defined in this study, in no way limit the use of any of the test forms (since Design refers to spatial relationships, Building refers to contact relationships, Sorting may include all test forms in such broad categories as art forms, or clay pieces, and each discrete form is movable with ease), nonetheless, the structural characteristics of the individual test forms do appear to influence the frequencies with which individual test forms are used in these four behavior variables. For example, the geometric test forms, #1 through #9, and the "bits and pieces" test forms, #22 through #28, appear to encourage the use of Sorting; test forms #1 through #9 also appear to encourage the use of Building; while the solid three-dimensional characteristics of all 28 test forms appear to encourage the use of Design and Movement.

Clinical experience suggests that in normal samples the frequencies of test forms used in Sorting correspond to the frequencies of use of test forms #1 through #9 and #22 through #28, while test forms used in Building correspond to the frequencies of use of test forms #1 through #9. In other words, the frequencies of test forms used in Design, Movement, Sorting and Building in normal samples are primarily functions of the stimulus values of the test forms.

In sick samples, deviations from the expected correspondence of frequencies of *Test Forms Used* to use of test forms in *Design, Movement, Sorting and Building* are expected to occur due to the blurring of the stimulus values of particular test forms by the functional needs of the subjects tested.

Comparison of these data for the normal adult sample indicates that the number of test forms moved and used in Design correspond closely to the total number of the test forms used. Also that the number of times test forms #1 through #9 are used in Building and Sorting correspond to the frequencies with which these test forms are used and that test forms #22 through #28 are sorted as often as they are used.

Among children, the frequencies of test forms moved and used in Design correspond closely to the frequencies of test forms used, although Design frequencies run somewhat below Movement frequencies. These data also reveal that children limit Building and Sorting to the geometric test forms, #1 through #9 and Sorting alone to test forms #22 through #28, as do normal adults. These results support the observation made that the use of test forms in Design and Movement is a function of the three-dimensional characteristics of the test forms; the use of the geometric test forms, #1 through #9, in Sorting and Building and sorting of test forms #22 through #28 are functions of the structural characteristics of these particular test forms rather than of the samples tested.

Among sick samples the frequencies of test forms moved and used in Design correspond to the frequencies of test forms used, just as they do in normal samples, indicating that the use of test forms in Design and Movement by sick as well as by normal samples is more a function of the three-dimensional characteristics of the test forms than of the subjects tested. However, sick samples sort all test forms almost as often as they use them, and they build as often with "human" and other test forms as with the geometric test forms. The widespread use of test forms in Sorting and Building among sick samples suggests that these two activities among sick samples are as much a function of the needs of the sick subjects as of the structural characteristics of the particular test forms.

In short, when test forms *other than* the geometric test forms #1 through #9 are used in Building and when test forms *other than* these and the "bits and pieces" test forms, #22 through #28, are used in Sorting, they reveal significant attitudes or complexes of the subjects tested. On the other hand, when any particular test forms are moved or used in Design, they do not necessarily reflect special attitudes or complexes in the subject tested *unless* the test forms so used are considered in relation to the Number of Designs offered and the total number of test forms used in Design and in relation to the ways in which the test forms are moved and the total number of test forms moved. It should be remembered that the total number of test forms used in these four unique ways (Design, Movement, Sorting and Building) as well as the Number of Designs, Number of Sortings, Number of Buildings and the Types of Movements used provide significant clues to personality functions.

### FREQUENCIES OF DEVIANT UNIQUE TREATMENT VARIABLES USED IN PRODUCTIONS

The variables, Multiple Concepts and Arbitrary Combinations, are rarely used in 3-DPT Productions and, when they do occur, they reflect severe pathology. The variables, Opposite Characteristics and Alternatives appear occasionally in all samples but are most common in the neurotics' records. The variables, Isolate Manipulations and Isolate Ideas rarely appear in normal adult records and may scatter through children's records and neurotic records; they are fairly common in alcoholic records and occur with great frequency in psychotic records. The consistently high incidence of Isolate Manipulations and Isolate Ideas in psychotic records, as against the low incidence of these variables in normal adult, children's and neurotic records, suggests that the presence of these Isolate Variables in any record has pathological significance.

Examination of the frequencies that each test form is treated by these deviant variables revealed a scattering of these deviations through many test forms, indicating that the uses of these deviant variables are functions of the subjects tested rather than functions of the stimulus values of the test forms. In view of the fact that these deviant behaviors are functions of the subjects rather than of the test forms, frequencies of test forms treated in each deviant way by each sample were summed to reveal the differences between samples in the use of these deviant variables. Examination of the distributions of frequencies of these variables in the different samples reveals the relative pathological significance of these variables. Thus it appears that Multiple Concepts, Isolate Manipulations, Arbitrary Combinations, and Isolate Ideas are indices of psychoses while Opposite Characteristics and Alternative Concepts (with use of either-or) are indices of neuroses. Consequently, when any one of these deviant variables appears in the records of normal adults or children aged 9 years or more, defective functioning is indicated. Furthermore, when the variables identified as "indices of psychoses" appear in records of neurotic subjects, they suggest underlying psychosis masked by neurotic defenses and, conversely, when the variables identified as "neurotic indices" are present in records of psychotics, they reflect efforts in the subject to hold on to reality and as such suggest favorable prognosis.

## Chapter VIII

# Contents Variables in 3-DPT Productions

Contents projected onto test forms in Productions are always interpreted in relation to the symbolic significance of the particular test form which elicited the content, as well as in relation to the particular manner in which the test form is manipulated and in relation to the setting in which it is used. Popular contents of a test form in a Production reveal significant attitudes of the subject while rare contents of a test form in a Production reflect significant complexes in the subject. *Failure to use the popular human test forms* in a production *reflects a complex* in the relationship represented by the omitted test form, *while inclusion* of test forms that are generally little used in Productions, e.g., #15, #18, #22 through #28, reveals significant complexes in the subject, particularly when these test forms are used in rare contents.

The content variables in the Productions are roughly classifiable into three categories, namely:

1. Class of object: bone, human, animal, nature, food excreta, inanimate and vague.

2. Descriptive: motion, latent, mythological, artificial, agent, object, religious, detail, negative symbolism, positive symbolism.

3. Functions of the subjects: Rejection of test form, criticism of test form, ambiguity of response and neologisms.

The frequencies of content variables for each test form for the combined tested populations reveal the popular and rare contents for each test form. Popular contents appear primarily to be functions of the test forms; however, the specific contents within the broad content categories are functions of the subjects tested and thus should reveal particular attitudes of the subject tested. The specific contents used in the Productions were not tabulated; however, the types of specific contents projected onto the test forms were tabulated and are presented below.

Clinical experience indicates that in sick samples the specific contents projected onto the test forms in the Productions are repeated in the Naming Test responses, while in normal samples the specific contents may differ from the Productions to the Naming Test but the broad content categories remain the same. Consequently, the listings of the frequencies of specific contents in the Naming Test responses provide a good sampling of the specific contents projected onto each test form.

## Rejections, Ambiguity, Neologisms, Criticisms

These four content variables, classified as *functions of the subject,* have very low frequencies throughout the test forms. Thus no particular test form receives special attention by these four functions. The consistency of low frequencies for these variables of behavior in Productions verifies their classification as functions of the subject tested. The rarity of these four variables in the Productions of the total population tested indicates that no matter what test forms are treated in these ways, they reflect significant complexes in the subject's relationships to himself, others, or the physical environment. The symbolic significance of the particular test forms used by a subject in any of these four ways will reveal the particular relationships where the complexes exist.

### POPULAR AND RARE CONTENTS

The data on the frequencies of use of each test form and the frequencies of each content given to each test form by the subjects using the test forms, reveal that the content, *excreta* is the rarest content used in the class of objects, while *negative symbolism* and reference to a *detail* of a test form are the rarest contents in the descriptive class. The rarity of these contents suggests that their presence in any Production for any test form reveals significant complexes of the subject tested. The particular test form to which they are applied will reveal the direction of the significant complexes. Thus if *excreta* are *seen* in *details* of test form #20, it is apparent that hostile, aggressive, furtively expressed complexes are experienced toward the home relationships. This particular response was given by an alcoholic man of 34 who committed suicide several years after the testing. Another example of the use of excreta is seen in the Production of a neurotic woman who placed test form #24 next to test form #17 and said: "This [#24] is the feces that my child [#17] makes in his diaper and it sometimes falls out onto the floor, it is so messy, it makes me sick." Here the use of excreta reveals the hostile, aggressive, furtive complexes of the subject (mother) while the relationship of test forms #24 to #17 reveals the direction of the aggression, namely, the child.

#### TEST FORMS #1 THROUGH #9

These geometric test forms are popularly identified as inanimate; the remaining content categories are seldom elicited by them. Thus the interpretive significance of these test forms, when used in a Production, is based on the symbolism inherent in the test form structures, amplified by the particular contents elicited or projected onto the test forms and the manner in which the test forms are manipulated in the Production.

### TEST FORM #10

Test form #10 is popularly identified as animal, inanimate, object, agent in motion, or latent. It also scatters rather consistently in fairly high frequencies throughout the remaining contents. Use of test form #10 in the popular contents reveals significant attitudes of the subject toward adult female sexuality. Use of test form #10 in the rare contents reflects significant complexes about adult female sexuality.

### TEST FORM #11

This test form is seldom used in a Production and, when it is used, it scatters through many contents with somewhat larger frequencies in the food and inanimate contents. The rarity of use of test form #11 in Productions suggests that its inclusion in a Production has special significance for the subject tested and that the subject has a sexual complex. The specific content projected onto this test form in a Production reveals the way in which the subject handles his complex.

### TEST FORM #12

This test form is popularly identified as human, in motion, or latent. It is often seen as artificial (statue), an object of action, or a religious object. Test form #12 is rarely used in any of the other contents, so that its use in a rare content reflects a complex about adult female authority. Use of test form #12 in popular contents reveals significant attitudes toward the adult female authority roles. On the other hand, since test form #12 is one of the most frequently used test forms in Productions, failure to use it in a Production reflects a significant complex in the subject in relation to the adult female authority roles.

### TEST FORM #13

This test form is popularly seen as inanimate and is rarely used in any other contents. Use of #13 in a rare content in a Production reflects an adjustment complex.

### TEST FORM #14

This test form is often seen as human or inanimate but, for the most part, it scatters quite consistently through the many contents. This scatter is understandable in view of the vagueness of the structure of this test form. The specific contents projected onto this test form reveal significant attitudes of the subject toward fertility, nurture, childbirth, and the nurturing mother figure.

### TEST FORM #15

This test form is rarely used in Productions and, when it is used, it scatters through many contents in small frequencies with a slightly higher frequency in inanimate content. The rarity with which #15 is used in a Production suggests that its use in a Production reflects a sexual complex.

### TEST FORM #16

This test form is commonly identified as human, nature, inanimate, animal and/or religious in the Prenaming Productions and scatters with fairly high frequencies throughout the remaining contents in the Prenaming Production and throughout all the contents in the Postnaming Production. The scatter of test form #16 among most of the contents is due in part to the complexity of the test form structure. The use of test form #16 in popular contents and other frequent contents reveals the subjects' attitudes toward the adult heterosexual role. The widespread use of #16 in Productions by the total tested population suggests that failure to use test form #16 in a Production reflects a complex in regard to the adult heterosexual role. Use of #16 in rare contents also reflects a complex in the subject toward adult heterosexuality.

### TEST FORM #17

This form is commonly identified as human, animal, agent, in motion, latent. In the Postnaming Production it is also identified as ambiguous. This last use of test form #17 reflects feelings of ambivalence in identity in the subject tested. Test form #17, like test form #16, is popularly used by the total tested population and scatters in fairly high frequencies through many contents in addition to the popular contents assigned to it. The scattering of #17 through many contents in fairly high frequencies is accounted for, in part, by the complexity of the test form structure. The use of test form #17 in popular contents and in other frequent contents reveals significant attitudes of the subject toward his childhood self concept and/or toward the role of children, while failure to use test form #17 in a Production reflects a complex in the subject around his own childhood self concept and/or around the role of children.

### TEST FORM #18

This test form is rarely used in the Productions of the total population but, when it is used, it is generally seen as nature or inanimate content. Its use in the remaining contents is rare. The rarity of use of test form #18 in Productions suggests that its use in a Production, whatever the content projected onto it may be, reflects a complex about fertility, pregnancy, the foetus, childbirth, and the creature in need of nurture.[1]

### TEST FORM #19

This test form is popularly identified as nature and/or inanimate content. Its use in the remaining contents is rare. Use of test form #19 in popular content reveals the subject's attitude toward his personal social role. Use of test form #19 in rare contents reflects a significant complex in the subject about his personal social role.

### TEST FORM #20

This test form is popularly seen as human, in motion, or inanimate. Test form #20, like test forms #16 and #17, scatters in fairly high frequencies through many contents and, like test forms #16 and #17, this scattering is in part explainable by the complexity of the test form structure. The use of test form #20 in popular and frequent contents reveals the subject's attitudes toward the childhood home relationships and present home relationships. Its use in rare contents reflects a significant complex in the subject in regard to his home relationships. The popularity of test form #20 in the Productions of the total tested population suggests that failure to use this test form in a production also reflects a significant complex in regard to home relationships.

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[1] Compare to test form #14.

### TEST FORM #21

This test form is popularly identified as human, an agent, in motion. It is rarely used in other categories. The widespread use of #21 as human, agent, in motion, indicates that most subjects in our tested population view adult male authority as an active human agent, which is the Western cultural concept of adult male authority. However, the specific attitudes of the subject toward the adult male authority are revealed by the specific type of human, type of agent, and type of action projected onto test form #21 by the subject. Failure to use test form #21 in a Production or use of test form #21 in rare contents reflects a significant complex in relation to the role of the adult male authority.

### TEST FORMS #22, #23, #24, AND #25

These test forms are commonly identified as bone, human, or inanimate. They scatter fairly consistently and in fair frequencies in many contents in proportion to the frequencies of use of these test forms. This scattering is understandable in terms of the vagueness of the structure of these forms. Use of test forms #22 and #23 in popular content reveals the subject's attitude toward male sexuality. Use of these two test forms in rare contents reflects a significant complex in regard to male sexuality. Test forms #24 and #25 are so rarely used in Productions, that if they are used at all, no matter what content is projected, it reflects a complex around male sexuality.

### TEST FORMS #26, #27, AND #28

These minute test forms are infrequently used in Productions but, when they are used, they are most often identified as nature and/or inanimate. Here again, like test forms #22 through #25, they scatter rather consistently through many contents due to the vagueness of their structures. The scattering of these "bits and pieces" in many contents as well as their limited use in Productions suggest that their very presence in a Production reflects significant complexes in the subject.

To summarize, the data on frequencies of contents for each test form in Productions reveal that the geometric test forms #1 through #9 are popularly seen as inanimate objects. Test forms #10, #16 and #17 are popularly seen as animals, and test forms #16 and #17 are also popularly seen as human, as are test forms #12, #20 and #21. Test form #11 is popularly seen as food or inanimate, while test forms #13 and #15 are seen most often as inanimate. Test forms #18 and #19 are most often seen as nature and inanimate as are also test forms #26, #27 and #28. Test forms #22, #23, #24 and #25 are most often seen as bone, human, and inanimate.

## SPECIFIC CONTENTS IN NAMING TEST

Contents in the responses to the Naming Test are arranged in rank order frequencies for 162 subjects of the tested population, revealing popular and rare responses as well as responses that are unique to particular sample populations.

### TEST FORM #1

Soap (56); building block (32); package, ice cream, abrasive, tomb, doorstep (10 to 15); stage, rectangle, eraser, stone bed, gold brick, mixing slab, writing tablet, swimming pool, paperweight, ink pad, razor case, workbench (5 to 9); suitcase, door, book, sandwich, piece of cheese (1 to 2 children); brick to throw (2 neurotics); bread and rejected (2 alcoholics).

### TEST FORM #2

Bar of soap (61); piece of fudge, flagstone (20); stone tablet, writing tablet, pillbox, doormat, domino, abrasive, eraser, cigarette lighter (10 to 15); dress box, suitcase, rectangle, tombstone, envelope, pocketbook, paperweight, doorstep, breadboard (5 to 9); toy block, building brick, bed, pastry, book, mirror, cheese, table top (2 to 5 children); table top (also 3 neurotics); cushion, knife, baby soap (3 psychotics).

### TEST FORM #3

Building block (57); caramel (35); dice (28); geometric cube, eraser (20); symbol, box (5 to 9); hassock, trailer, Tiffillim, a Hebrew religious object (1 to 2 normal adults); oriental house, cube of sugar, glass cake case, soap (1 to 2 children); symbol (4 alcoholics); drum, "the dye is cast" (1 to 2 neurotics); clay cube, art form (1 psychotic).

### TEST FORM #4

Geometric form (45); piece of cheese, pie (30); cornice (25); building block, pyramid (15); clay triangle (10); tombstone, musical triangle, spearhead, tent, YMCA seal, Christmas tree, wedge, paper hat, house, traffic sign, Brillo pad, art form, half of star (5); chocolate (1 child); ventilator, stone, rejected (1 to 2 alcoholics); Flatiron building, upward movement, symbol (1 to 2 neurotics); soap, yeast, electric plug, Alps (1 to 2 psychotics).

TEST FORM #5

Pillar, post (30); building block, shaving stick (20); geometric cylinder, drum (15); tree stump, barrel, Tootsie Roll (10); pipe bowl, dowl, apothecary weight, spool, candle, log seat, broken pillar, oil tank, water pipe, bolt of cloth, silo (5 to 9); chopping block, tower, chimney, glass cylinder (1 to 2 children); arm, symbol, hassock, rolling pin, cheese roll, table, body stump, log for fire (1 to 2 psychotics).

TEST FORM #6

Tootsie Roll, toy block, tree stump, stool, tube, drum, pillar in architecture, geometric cylinder (10 to 17); piling on dock, rolling pin (5 to 9); weight, bandage, cork, spool, candle, elephant paw, log of wood, headless mushroom, cue chalk, roll of nickels, sleeping bag, lipstick (2 to 5); chimney, animal organ, pillow, chairleg, printing roller, high silk hat, glass cylinder, water pipe (1 to 2 children); art form, shell (1to 2 alcoholics); saltcellar (1 neurotic); symbol of logic, foreign symbol, arm, spine, lighthouse, erect penis, rejected (1 to 2 psychotics).

TEST FORM #7

Trylon, dunce cap (26); ice-cream cone, geometric cone, pyramid (20); church tower, tepee, pine cone (10 to 15); wedge, Washington Monument, mountain (5 to 9); awl, candle, thread case (2 to 4); sugar cone, clown's nose (2 normal adults); hat, bowling pin, tower, gas tank, Christmas tree (1 to 2 children); firecracker, pottery, air current detector, rejected (1 to 2 alcoholics); funnel, upward movement (1 to 2 neurotics); symbol, nipple, Cleopatra's Needle, height, suppository, West Point, penis, instrument (1 to 2 psychotics).

TEST FORM #8

Playing ball (71); globe, marble, candy ball (15 to 20); clay ball, clay bowl (5 to 9); architectural design, rolling stone, crystal ball, nut, new potato, fruit, eraser, bomb, cookie jar, egg yolk, model of head (5 to 9); balloon (2 children); observatory, art form, hedge (1 to 2 neurotics); art form, pleasure symbol, planet, penis, button, testicle, rejected (1 to 2 psychotics).

TEST FORM #9

Playing ball (74); candy ball (18); marble, globe (11); bird egg, fruit, putty ball (5 to 9); rock, storage tank, medicine ball, bomb (2 to 4); mushroom, mothball, cotton ball (1 to 2 normal adults); cork, knob, lampshade (1 to 2 children and alcoholics); observatory, chestnut (1 neurotic); ornament, penis (1 psychotic).

TEST FORM #10

Coiled snake (68); coiled rope (32); pretzel, pastry (26); rag rug (12); clay snake (6); wire, feces, whirlpool (2 to 5); worm, calcified shell, insulation tape (1 to 2 normal adults); spiral, racetrack (1 to 2 children); ear (1 alcoholic); labyrinth, rejected (1 to 2 neurotics); coils, intestines, brass horn, umbilicus, iris of eye, vagina (1 to 2 psychotics).

TEST FORM #11

Lips, mouth, pastry, bun (45 to 50); clam, toilet seat (15 to 20); dental impression, jewel box, pocketbook (5 to 9);

wax lips, slate, false teeth (2 to 4); man's cap (1 normal adult); frog's mouth, sandwich, medal (3 to 5 children); duck's bill, heating pad, hockey puck (1 to 2 children); vagina, base of statue, rejected (1 to 2 neurotics); vagina, diploma, basin with cover, hub of car, nut-step, compact, bathmat (1 to 2 psychotics).

### TEST FORM #12

Madonna, statue of Madonna, woman in shawl, woman grieving (24 to 30); nun (10); saint kneeling (5); ghost, unfinished statue of woman, cruel woman, torso, The Thinker, statue, Christmas candle, broken-down tree, statue of animal, nude woman (2 to 4); cloak-and-dagger operator, Korean soldier in blanket, seated woman, old shepherd (1 to 2 normal adults); rock, statue of Egyptian god, hammerhead, chewing-gum wad (1 to 2 children); general representation of woman, statue of person of no particular sex or age (1 to 2 alcoholics); mommy (1 neurotic); Madonna with child (2 to 3 neurotics and psychotics); rock, pregnant woman, Buddha in shroud, a man (1 to 2 psychotics).

### TEST FORM #13

Chair (29); shoe (26); stairs, stairway (10 to 15); gaping jaws, toilet seat, art form, throne (6 to 10); modern head, wall hook, two-tier table, rejected (5); skooter, bookend, amphitheater (2 to 4); seal, electric iron, rabbit, airlift, fingers, ashtray, footrest, paper cutter, deck, mast, arm and hand, sole of shoe (1 to 2 normal adults); statue of female (2 children and 1 psychotic); shoe tree, planer, eroded rock (1 to 2 children and 1 alcoholic); alligator head, two people at grave, owl on fence, anatomy (1 to 2 neurotics); altar, tongue, clubfoot, baby carriage, tombstone, fountain, idol, cobra, woman on stool, pregnant woman, symbol of achievement (1 to 2 psychotics).

### TEST FORM #14

Dental impression (57); human face (17); glacier, two ears, shell, pelvic bone, one ear, sofa, jaw and teeth (6 to 11); skull, footrest, skeletal breast, ashtray, impression in sand (1 to 2 normal adults); masked face, Negro ear with ring in it, landscape, stone, mountains, fountain, face of frog, clay (1 to 2 children); tiger (1 neurotic); hearth, symbol, human in robe, candy, dish, coral, clam, fighter, altar, mask, buttocks (1 to 2 psychotics).

### TEST FORM #15

Boulder (33); stone to throw, clay, thumbprint, walnut, bowl, rejected (10 to 15); oyster shell, half peach, roll (3 to 5); fruit, kidney, chair, mushroom, bone (1 to 3 normal adults); coffee bean, ashtray, mudball, mailbox, girl's profile (1 to 2 children); corn grinder (1 alcoholic); gum, chin, vagina, finger-rest (1 to 2 neurotics); mouth, shrine, symbol of good or evil, hand, water lily, feces, piece of ball, toilet, river bed, baked potato, anus, hassock, eroded rock (1 to 3 psychotics).

### TEST FORM #16

Tree with vines (24); snake-woman, ram's head (14); Buddha, religious symbol, woman, snakes on tree, Christmas-tree decoration, architectural grotto (12); sculpture, art form, octopus, pretzel (5 to 9); fountain with vines, totem pole, pole with chains, oriental dancer, rubric, architecture, vase with leaves, love triangle, person bound in rope, music horn (2 to 4); nest of baby snakes, tree of life, woman with ring in her nose, coral, torso with arms folded, half man half animal, symbol in conflict, goat on mountain, nun, animal in water, suit of armor (1 to 2 normal adults); bell, branch of tree, rejected (1 to 2 children); sick vine, molten lava (1 to 2 alcoholics); Laocoon with Snakes, Grecian mask, keyhole, shrine, altar, symbol of fear, wedding ring, knotted ropes, child on mother, three monkeys, puzzle (1 to 2 neurotics); backbone, monkey tree, statue of woman, two people chained, pogoda, skeleton of person, four acrobats, Christmas candy, penis in vagina, medicine man (1 to 2 psychotics).

### TEST FORM #17

Small animal in action, squirrel on tree, small animal on stool, or chair (35); woman grieving (28); monkey thinking (22); embryo, foetus (13); child with head in arms, statue of small animal (10); wild animal like lion, tiger in action, person thinking, dog begging, statue of baby, statue of madonna, bird on rock, toad (4 to 7); driftwood, clenched fist, two children, little girl, Hindu, eagle or vulture, symbol of weariness, man crouching, mouse curled up, toadstool (1 to 2 normal adults); statue, crushed body, rejected (1 to 2 children); mythological person or animal, rejected (1 to 2 alcoholics and neurotics); fist with pointing finger, deformed person, sick child, animal licking, crippled old man (1 to 2 neurotics and psychotics); person hiding his nudity, ugly baboon, tree stump, mascot, reptile in swamp, masturbating man, person climbing, man and woman (1 to 2 psychotics).

### TEST FORM #18

Stone for building (37); potato (26); egg (21); rock for throwing (18); clay or dough (13); rejected (12); "chaleh" the Jewish Sabbath bread, pastry (7); nut, bean, Plymouth Rock, pillow (5); slug, baby in womb, horse-pill, soap (1 to 2 normal adults); head of bald man, pig's body, oval shape, mushroom (1 to 2 children); laundry bag (1 alcoholic); piggy bank, full womb (1 to 2 neurotics); package, lung, darning egg, kidney, bowl, ball, stump of leg (1 to 2 psychotics).

### TEST FORM #19

Wave breaking (26); foot (20); rock with growth on it (17); rock in water (14); old boat, sea shell, gramophone, animal on cliff, cave, rejected (5 to 9); seat, anvil, fountain dripping, mushroom, ear, iceberg (2 to 4); art form, lamb, handgrip on plane, calla lily, Rock of Gibraltar, fish fin in water, bronzed baby shoe, fog horn, emblem, rocket ship, French telephone, sand dune (1 to 4 normal adults); shoe, sphinx and bush (1 to 2 children); statue of a wave (2 alcoholics); pedestal, statue of rabbit (1 to 2 neurotics); skull, animal head, symbol of movement, woman diving, temple on rock, toe, coral, amphitheater, covered wagon (1 to 3 psychotics).

### TEST FORM #20

Small animal eating (22); ruins (15); animal climbing wall, person playing at rocks or wall (10); doorway, tombstone and trees, people near house, children at fountain, water over rocks, person at tomb, child at window, statue, tombstone with weeds over it (4 to 9); Lincoln on chair, house on mountain, child climbing hill, men working (2 to 3); architecture, dog nosing food, statue of people (4 to 6 normal adults); vase with flowers, ice cream, volcanic eruption, preacher on pulpit, jello, rock garden, child leaning against books (1 to 2 normal adults); fruit, mountain (5 to

7 children); statue of child, dirt on altar, chocolate-covered candy, food on table, man at desk, ruined pedestal, rejected (1 to 2 alcoholics); Childe Harold at castle, elf behind rock, person going up hill, monkeys, lion biting breast (1 to 3 neurotics); animals praying, cash register, shepherd and flock, symbol of power, ancient building, parrot on rock, baby crying, dog masturbating, frigid wife, train rails, animals kissing, person being beheaded, Roman gorging (1 to 3 psychotics).

### TEST FORM #21

Man working hard (49); prehistoric or cave man, savage (18); Atlas or strong man (13); man playing instrument, man sorrowing, man bearing cross, two people wrestling, male wrestler bending bar, man leaning over fence, statue of powerful man (5 to 8); slave laboring without dignity, man with arms outstretched, trapeze artist swinging on bar, dwarf, statue of depressed man (3 to 4); man lost in jungle, prisoner hands tied to stick, man carrying cudgel, discus thrower, bear lifting log, tired old man, Popeye the Sailor, giant with club, prizefighter (1 to 2 normal adults); distorted man, statue of something (1 to 2 children); old man carrying Sinbad the Sailor, man pushing car, fierce ugly man, petrified tree, Christ crucified, man hunting wild beast, statue of something picking up something (1 to 2 alcoholics); man stoking a cannon, a feeling of protest, an unfinished piece of sculpture, man struggling for health, statue of a male god (1 to 2 neurotics); female burdened with sorrow, person laboring, petrified elephant, elephant with lion's head, Narcissus at the pool, person holding something with which he wants to play, man trying to fly (1 to 2 psychotics).

### TEST FORM #22

Animal leg (33); bone splinter, human leg (28); tree stump (14); human form, twig, doll's limb, dog's bone as food, statuary, arm, candy, rejected (5 to 10); handle, razor clam, bolt of cloth, finger (1 to 2 normal adults); fish head with one eye, firecracker, lady in evening dress, pillar of building (1 to 2 children) mushroom stem, symbol (1 to 2 neurotics); weight, penis, monster head, tall building, Cleopatra's Needle (1 to 5 psychotics).

### TEST FORM #23

Human leg (41); animal leg (29); tree stump (12); prehistoric bone (10); doll leg, torso, wooden leg, clay, wood carving, clubfoot (7); boot, bone splinter, pogo stick, cypress twig (1 to 2 normal adults); worm, statue, dancer with raised arms, rejected (1 to 2 children); threatening arm (3 alcoholics); feces, symbol of person (1 to 2 neurotics); crippled animal leg, weight, symbol of movement, bird on tree, broken statue, thumb (1 to 5 psychotics).

### TEST FORM #24

Arm, limb (30); doll's limb (28); bone (24); candy (10); dog's bone for food, twig, rejected, chalk (8); insect, pebble, cigarette stub, dowl, worm, tooth, splinter, chisel (1 to 2 normal adults); lead pipe, tube of paste, middle of snake (1 to 2 children); statue (2 alcoholics); symbol, log (1 to 2 neurotics); sphinx, weight, statue of something, food, clay, sealing wax, feces (1 to 4 psychotics).

### TEST FORM #25

Prehistoric bone, broken arm of doll, leg – human or animal, twig, rejected (10 to 16); limb of human being, broken statue, twisted candy, dancing shoe, paw, hoof, cigarette stub, arm, piece of wood, bit of clay, foot (3 to 8); paralyzed hand, stone face, beaver tusk, sealing wax, bug (1 to 2 normal adults); stone, dead duck (1 to 2 children); something broken (1 alcoholic); monkey face, feces, symbol of shattered life (1 to 2 neurotics); rubber pipe, sex organ, torso, heavy weight, hooded woman (1 to 5 psychotics).

### TEST FORM #26

Crumb, pebble (26); foot, gravel (17); tooth, rejected (13); splinter (10); paw, button (5); heart, saddle, shell (1 to 2 normal adults); lion without head, frog, icing drop (1 to 2 children); scarab, tree stump, cinder, petal (1 to 2 alcoholics); Rock of Gibraltar (1 neurotic); clitoris, limb of animal, bit of flesh (1 to 3 psychotics).

### TEST FORM #27

Pebble (30); crumb of bread (20); tooth, tooth filling (19); foot, rejected (13); bean (10); splinter, paw, hoof, jewel, button (3 to 7); sea mussel, dog, wave (1 to 2 normal adults); hill seen from plane, icing drop, pill, shell (1 to 2 children); petal (1 alcoholic); Rock of Gibraltar, nut (1 to 2 neurotics); hoofprint, Aphrodite, animal (1 to 2 psychotics).

### TEST FORM #28

Pebble (31); rejected (20); pea (18); jewel (13); drop of cement (10); splinter, filling of tooth, turtle, tooth, bug (3 to 9); seed, sulphur on match head, barnacle, head of bear, raindrop, wart, nut, hill, pill, paw, nugget (1 to 2 normal adults); bullet, shell, cookie, nail in paw, baby in sleeping bag, little mouse (1 to 3 children); a period (1 alcoholic); petal, feces, foot, person (1 to 2 psychotics).

# Chapter IX

## Testing of Limits Variables

The Testing of Limits 1 (TL1) procedure (pp. 6, 283) was administered to those subjects who were unable to produce at all in the Productions or had not used test forms #12, #17 and/or #21 as humans in a Production or in the Naming Test. Consequently, TL1 data are available for only 6 alcoholics, 2 neurotics, 3 depressives, 2 catatonics and 6 paranoid schizophrenics of the tested samples. These 19 subjects are combined into one sick sample for the purpose of evaluating the TL1 Variables. In addition to the TL1 data on the sick subjects, TL1 data are also available for 43 children of the tested sample.

The children were tested with the Testing of Limits procedure after they had finished the other three testing steps in order to determine whether this procedure provides some of the significant behavior variables provided in the Productions. It was expected that the Testing of Limits procedure would provide those behavior variables that would reveal the climate of the home relationships, i.e., the subject's self concept and his attitudes toward parental roles as well as the manner in which he relates to the authority figures and the manner in which the male and female authority figures relate to each other. If the Testing of Limits procedure does reveal these significant attitudes of the subject, then it may be used as a short form of the 3-DPT and may prove very useful for emergency testing and screening purposes. Furthermore, if the sick subjects were able to identify these three "human" test forms as human or animal and were able to relate these test forms in a Story in the Testing of Limits, then the rationale of introducing test forms #12, #17 and #21 into a Testing of Limits procedure has merit.

Variables that are elicited in both the Productions and in the Testing of Limits include Rate of Production, Number of Test Forms, Content, and Feeling Tone Variables. Variables that are elicited by the special structuring of the Testing of Limits and define the precise manner in which each of the three test forms is treated in the TLI include:

Test form is not identified, i.e., is ignored.
Test form is not touched.
Test form is touched but is not moved.
Test form is turned with its back to the others or to one other test form.
Test form is moved away from other(s) but facing others.
Test form is moved toward other(s) in friendly manner.
Test form is moved toward other(s) in assault.
Test form is not related to the others in theme.
Subject denies a relationship exists.

The data on the Behavior Variables common to the Productions and to the Testing of Limits (except for Feeling Tones) are evaluated here in terms of median scores and spread and compared where possible to the mean scores for these variables in the Productions. The Feeling Tone variables and the variables describing the precise treatment of the three test forms used in the TL1 are presented in terms of the per cent of samples using these variables and, where possible, these data are compared to similar data in the Productions.

## Reaction Time and Total Time Variables

The Gesture and Verbal Reaction Times of the children in the Testing of Limits averaged 8 seconds each in contrast to a GRT of 2 seconds and a VRT of 7 seconds in the Productions. Total Time for the Testing of Limits for children is 4.5 minutes, compared to 5 minutes in the Productions. The delay in Gesture Reaction Time (GRT) among children in the Testing of Limits is apparently due to the limits set for the subject by the examiner's assumption of responsibility in selecting the test forms rather than inviting the subject to do so, as in the Productions. In other words, children as a group accept the additional limits and increased structuring set by the examiner in the Testing of Limits by delaying urges to action. Their delay for verbalizations and total time is consistent for TL1 and Productions.

For the sick subjects the Testing of Limits median Total Time was 7 minutes, compared to the mean Total Time of 8 minutes in the Productions. Because reaction times for the sick subjects were not available for all the subjects, they cannot be reported here for the sample. However, for the 13 cases for whom the reaction times were recorded, the median GRT and VRT were 8 seconds, which is not too different from the GRT and VRT of the sick subjects in the Productions, where the GRT was 7 seconds and the VRT was 9 seconds.

## Test Forms Added and Used in the Testing of Limits

In the Testing of Limits procedure the subject is not expected to add test forms beyond the three test forms presented to him by the examiner. The examination of the performance of the children on this variable of behavior supports this expectation, namely, 42 of the 43 children did not add test forms in the TL1 and one child added one test form. Of the sick sample, 16 of the 19 subjects did not add test forms while one subject added one test form and two subjects added two test forms. Since the Testing of Limits directions do not invite the subject to add test forms, the fact that a subject does add test forms in the Testing of Limits procedure suggests that the subject has difficulty inhibiting ideas and urges pressing for expression and so tends to override limits set by authority.

The variable, Total Test Forms Used in the Testing of Limits, refers to the use of the three test forms presented to the subject by the examiner as well as to test forms that a subject might have added to the TL1 situation. Subjects are expected to use the three "human" test forms presented in the TL1 setting. Use of less than three test forms reflects a complex in relation to the "human" test form ignored while use of more than three test forms in the TL1 (like adding test forms in TL1) reflects the presence of ideas and urges pressing for expression which lead the subject to function beyond the limits set by authority.

Examination of the data on the Number of Test Forms Used in the TL1 revealed that 40 of the 43 children (93%) used the 3 test forms presented to them by the examiner, 1 child used only 2 of these test forms, while the child who had added 1 test form used all 4 test forms in the Testing of Limits Story. Among the sick subjects, 15 of the 19 subjects (80%) used the 3 test forms presented, while 1 subject used only 2 test forms, 1 subject used 4 test forms, and two subjects used 5 test forms, i.e., the sick subjects who added test forms to the TL1 setting also used these test forms in their Stories. In the event that a subject adds a test form to the TL1 setting and does not use it in the Story, this Isolate Manipulation reflects a complex in the subject in the area symbolized by the test form added and not identified.

## Number of Agents and/or Objects Introduced into the TL1 Story but not Represented by Test Forms

This variable, Agents and/or Objects Not Represented by Test Forms appears to represent ideas and/or urges pressing for expression which may not be expressed through reality action, and so are gratified through fantasy productions. Statistical analysis of this variable in the Productions reveals that children and sick subjects differ significantly from normal adults in the use of Agents and/or Objects Not Represented by Test Forms, with children and sick subjects displaying this behavior more often than normal adults. The Testing of Limits data on this variable reveal the strong tendency on the part of children and sick subjects to use Agents and/or Objects Not Represented by Test Forms in a Story. Sixty-five per cent of the children's sample give a median of 1 Agent or Object with a spread of $1-9$ while 32% of the sick subjects give a median of 3 Agents or Objects with a spread of $1-4$. These results correspond closely to the results obtained in the analysis of the Production data for this variable.

## Identifications of Test Forms #12, #17 and #21 in Testing of Limits by Children and Sick Subjects

Children identify test form #12 and #21 as human, for the most part, and they identify #17 as animal as often as human. Children *rarely fail* to identify these test forms in the Testing of Limits. Occasionally, children identify these three test forms as man-made, abstractions, artificial, mythological and/or religious. Children see these three test forms for the most part as agents or objects, in active or latent motion. These findings correspond to the results obtained by analysis of contents elicited by or projected onto these three test forms in the Productions by the total tested population.

Of the 19 sick subjects tested with the TL1 Procedure (they had not been able to produce in the Productions or had not used test forms #12, #17 and/or #21 as human either in the Productions or the Naming Test), half were able to identify these three test forms as human in the Testing of Limits. A substantial number of these subjects also identified these three forms as man-made, or abstractions, artificial, religious or mythological, and as agents or objects seen in active or latent motion. The ability of these sick subjects to identify these three test forms as human and active in the Testing of Limits setting but not in a Production indicates that these sick subjects can accept themselves and other humans in a carefully structured simple situation but not in a large, complex, permissive situation. Those sick subjects who were unable to identify the three test forms at all in the TL1, where the setting is carefully structured but the component parts in the setting are ambiguous, are apparently too withdrawn to be able to function in a setting, no matter how simple, where they are expected to make choices. In order to function, such subjects need a completely structured situation, i.e., where the setting and the component parts are structured. To penetrate the defenses of such withdrawn subjects in order to reveal their attitudes toward themselves and others, the completely structured situation of the Second Testing of Limits (TL2) was devised.

## TREATMENT OF TEST FORMS IN TESTING OF LIMITS 1 BY CHILDREN AND SICK SAMPLES

Almost all the children related the three test forms in the themes of the TL1 Stories while about half of the sick subjects *related* the three test forms in the themes of the TL1 stories. These findings indicate that the Testing of Limits may reveal the ability of tested subjects to relate to others when the productions fail to reveal these abilities. About half the children *did not touch* the three test forms presented to them in the TL1 setting and about half of the sick subjects did not touch test forms #12 and #21 but only about one third of the sick subjects did not touch test form #17. When subjects do not touch test forms in the Testing of Limits, they appear to reveal acceptance of positive, established family relationships and, conversely, when test forms are touched or moved in the Testing of Limits, the action suggests the presence of urges to make some changes in the established relationships.

A substantial number of the children moved the test forms *apart* but left them *facing* each other, revealing by this behavior that they accept the positive relationship in the family but wish to reduce the dependency in the relationship; they are striving for independence. Of the sick subjects, only one moved test forms #12 and #21 apart, yet still facing each other, while two subjects moved #17 apart but facing center. This treatment of test forms in TL1 reveals strivings for growth and so serves as an index to good prognosis in sick subjects, while in children it reflects maturity strivings.

In contrast to the subjects who moved the *test forms apart* but facing each other are the subjects who moved the test forms *closer together in a friendly manner*. The few children and sick subjects who moved the test forms closer together reveal a positive attitude toward family relationships with a need for closer contact and greater dependency.

*Isolate treatment* of test forms in the TL1 has the same significance as Isolate Ideas and Isolate Manipulations in the Productions, revealing a complex in the area symbolized by the test forms treated in an isolate manner. No more than 2 of the 43 children treated test forms in TL1 as Isolate, while 3 of the 19 sick subjects treated the TL1 test form as Isolates. These data support the data on isolate treatments of test forms in the Productions which indicate that isolate treatment of test forms is predominantly found in records of sick subjects.

Just as positive, accepting family relationships and complexes are revealed in the TL1, so are hostile feelings and attitudes toward family relationships. Negative attitudes in family relationships masked by indifference are revealed by *turning a test form with its "back" to the center* or to the other test forms. A few of the children treated all three test forms in this way, while only one sick subject treated test form #17 in this way.

*Continuous Manipulations* of a test form in the Testing of Limits as in the Productions and the Naming Test reveal severe anxiety and confusion about the area symbolized by the test form, with futile efforts to reduce the anxiety. Thus continuous manipulation of test form #12 reveals anxiety and confusion about relations to the mother, treatment of #17 in this way reflects confusion about the self role, while treatment of #21 in this way reflects anxiety and confusion about the father role and relationships. A few of the children and sick subjects treated the TL1 test forms in this way.

Anxiety about the self role and relationships in the family, with inability to translate into action the urges to relieve the anxiety, is revealed by the variable, *Test Form Touched but Not Moved.* A few children and sick subjects treated the test forms in this way in TL1.

*Denial of Relationships* between the test forms in TL1 reflects unbearable feelings about the family roles and relationships, feelings that are relieved by denial of reality. One child and several of the sick subjects denied relationships of the test forms.

Finally, the movement of test forms toward each other in assaultive manner reveals hostile relationships that are overtly expressed. A few children and sick subjects treated the test forms in the TL1 in this hostile manner.

Generally, these data on identification of test forms in the Testing of Limits support and reinforce the identification data in the Productions, indicating that the test forms #12, #17, and #21 are popularly seen as human or animal, as agents, objects, in motion or latent, and that these identifications are at times qualified by descriptions of artificial, religious, or mythological. These facts of identification indicate that the Testing of Limits procedure provides and/or reinforces significant attitudes or complexes in the subject and thus is a useful short form of the 3-DPT for emergency and screening purposes. The fact that half of the sick subjects who had been unable to use these three "human" test forms as human in a Production or in the Naming Test, or had been unable to produce at all in the Productions, were able to use these three test forms in the TL1 as human, agents, objects, in motion or latent, and at times as religious, artificial or mythological, indicates that the Testing of Limits procedure is a valuable technique for penetrating the defenses of withdrawn subjects.

## FEELING TONES PROJECTED ONTO TEST FORMS #12, #17 AND #21 IN THE TL1

Feeling Tones in the TL1, like the feeling tones projected in the Productions, reflect a subject's "characteristic attitudes" toward himself and related objects, which in the case of the Testing of Limits are the parent figures. Feeling Tones are projected onto the test forms in the TL1 situation when the subject cannot release his action urges through action channels.

Analysis of Feeling Tones in the Productions reveals that the child sample freely projects fear, strivings and anger onto the test forms used in the Productions, while sick subjects project freely sadness, ambivalence, shame and confusion.

Analysis of Feeling Tone data indicates that the projection of Feeling Tones in the Testing of Limits corresponds to the Production data in the respect that children seldom project feeling tones other than happiness, striving, fear, anger and protectiveness, that is, they rarely project shame, restlessness, sadness, confusion, indifference, aloofness or conflict, in contrast to the sick samples who project these latter feelings freely, both in the Productions and in the TL1. Specifically, the children project strivings, protectiveness and happiness most frequently onto test form #12, happiness, fear and striving onto test form #17, striving, happiness, anger and protectiveness onto test form #21. In contrast, sick subjects project shame, fear, anger, sadness, confusion, indifference and aloofness as well as protectiveness onto test form #12, predominantly shame and anger onto test form #17, predominantly happiness and striving onto test form #21. Sick subjects apparently experience the most widespread and intense frustrations of action urges toward the mother figure, i.e., toward test form #12.

These data on the projection of Feeling Tones like the data on the identifications and treatment of test forms in the TL1 indicate that the Testing of Limits procedure reveals many of the significant attitudes of the subjects tested and thus may be used as a short form of the 3-DPT for emergency and screening purposes. These data also indicate that the TL1 is particularly effective in piercing the defenses of withdrawn subjects who cannot respond to the more permissive and complex situation of the Productions.

# Chapter X

# Directions For The Administration of The 3-DPT

Administration of the 3-DPT (66) requires that the 28 test forms be arranged in the standard design (230) on a table which is at right angles to a second table on which the subject will be asked to place the test forms he wishes to work with. The subject is then invited to come into the testing room and sit in the chair placed in the angle formed by the two tables, so that he has easy access to both tables. The examiner seats himself at the side of the particular table which permits a clear view of the subject's behavior in relation to the examiner and to the test forms on both tables. As the subject is seating himself, the examiner begins the directions to the Prenaming Production as follows:

## PRENAMING PRODUCTION

1. "These pieces [examiner indicates all the test forms by a wave of the hand over the test forms on Table 1 (T1)] do not have any special names, different people [children] call them different things. You may call them whatever you wish."

2. "Will you please *choose* some pieces, any pieces you wish and as many as you wish."

3. "*Place* them on this second Table [T2]." Examiner indicates the second tabletop.

4. "And *tell* a story using the pieces you have chosen in one story."

Examiner starts the stop watch as soon as the directions have been given. He records reaction times, time Story begins, time Story ends, time Production ends, as well as all verbalizations and motor behavior of the subject in response to the test forms. He also records the first test form reacted to, the test forms selected and the test forms added. The examiner should know the test forms by number so that he can record the test forms selected and added by the subject without diverting his attention from the subject's performance. When the subject has finished this task the examiner stops the watch and makes a drawing of the arrangement of the test forms that the subject used in his Prenaming Production. The mature examiner has little difficulty recording the subject's behavior even when the subject produces at a rapid rate, for the mature examiner can stop the watch when the subject finishes and finish the recordings without undue error. Should the examiner have difficulty keeping up with the subject, he should remember to stop the watch whenever he asks the subject to "hold it" so as not to increase spuriously the subject's total time of performance.

It is essential that the directions be given precisely as stated and in the exact order indicated. Any change in the phrasing of the directions or in the order of presentation of the directions and any repetitions of any part of the directions before the subject indicates a need for such repetition invalidate the testing.

We have found that the *Number of Repetitions of Directions* is a measure of dependency reflecting the degree of additional structuring the subject needs to function in the situation. Statistical analysis of this variable indicates that normal women require one Repetition of Directions significantly more often than normal men, and children require two Repetitions of Directions significantly more often than normal men and substantially more often than normal women. Furthermore, sick samples require two or more Repetitions of Directions in a Production significantly more often than normal men, women, and children. It is therefore essential that evidence of need for Repetitions of Directions, in whole or part, be carefully recorded as well as the number of times directions are repeated in whole or in part.

Repetitions of Directions are given under the following conditions:

1. Subject asks for clarification. (Examiner *never clarifies* the directions, he *only repeats* them.)

2. Subject asks for reassurance, e.g., "Am I doing it right?" "Is this what you mean?" etc. (Examiner answers such questions by repeating the directions.)

3. Subject is unable to respond to the directions for 3 minutes. (Three minutes is the mean Total Time for a Production for normal adult samples.)

4. Subject selects one form at a time and identifies it or gives a "story" to each form. When the subject states or indicates motorically that he has finished the examiner asks: "And your Story?" (Repetition of this part of the directions is given advisedly to determine whether the subject can follow through on the directions with the additional

structuring of an additional cue. The number of cues needed are significant for evaluating personality function.)

## NAMING TEST

When the subject has finished his Prenaming Story and Production the examiner replaces the test forms in the standard design on Table 1 and says:

"Now I will point to one form at a time and as I point to each form will you please tell me what it reminds you of."

The examiner points to the test forms in the standard Naming order: #1, #15, #21, #27, #5, #13, #24, #14, #20, #4, #8, #22, #16, #3, #25, #17, #26, #6, #12, #23, #7, #18, #2, #11, #7, #10, #23, #19. He records the GRT and VRT for each test form. The GRT refers to the time elapsing from the moment the examiner points to the test form to the moment the subject responds to the test form motorically. VRT refers to the time elapsing from the moment the examiner points to the test form to the moment the subject *names* the test form.

This procedure was introduced by Twitchell-Allen to give the examiner an opportunity to obtain the subject's associations to all 28 test forms. This task is especially useful when a subject has difficulty performing in the Prenaming Production, and when a subject uses only one or two test forms in the Prenaming Production.

## POSTNAMING PRODUCTION

When the subject has completed the Naming Test the examiner says:

1. "Now, once again, would you please *choose* some pieces, as many as you wish."

2. "Place them on this second table [T2]." Examiner indicates the second table by waving his hand over second tabletop.

3. "and *tell* a story using the pieces you have chosen in your story."

Examiner starts stop watch as soon as directions have been given. Examiner records behavior during and at the end of the Postnaming Production as in the Prenaming Production.

Here again, as for the Prenaming Production, the directions must be given precisely as stated in order to be valid. Repetitions of Directions must be avoided until the subject indicates a need for them. It is noteworthy that a simple change of phrase from "tell a story" to "make up a story" changes the structuring of the situation. To *tell* a story is more permissive than to *make up a story* for to tell a story requires the subject to decide whether to make up a story, (imaginative) or tell a story that he heard, read or experienced. In fact, subjects ask these very questions in response to "tell a story," thus providing additional significant behavior variables for evaluation of personality function.

## FEIN TESTING OF LIMITS PROCEDURES

### LIMITS I (TL1)

Examiner moves test forms #21, #12 and #17 to Table 2 and as he arranges these three test forms on the second table in a *triangular relationship, equidistant and facing a central point* he says:

1. "Now *I* will *choose* some pieces and

2. *place* them on the second table. Here they are." Examiner indicates the 3 test forms on Table 2 by a wave of the hand.

3. "Will you please tell a story about my pieces?"

Examiner starts the stop watch and records the subject's verabilizations and manipulations of test forms as he attempts to fulfill the directions given. If the subject does not identify them as "father," "mother," and "child" (male or female) in his Story to the Limits I, the examiner proceeds to Limits II.

LIMITS II (TL2)

If the three forms have been moved out of the triangular design by the subject during the Limits I, the examiner replaces them in the triangular design and says:

1. "Now I will begin a story using these three pieces in the story: This one [pointing to #21] is the father, this one [pointing to #12] is the mother, and this one [pointing to #17] is the little boy" (or "girl," depending upon the sex of the subject being tested.)
2. "Now you go on with the story."

Examiner starts the stop watch. As the subject works in Limits I and II, the examiner must be alert to record all verbalizations and every change made in the position of the test forms to each other, for these movements and manipulations are substitutes for words.

In Testing of Limits as in the Productions, GRT, VRT, TT of Limits and TT of Story are recorded. At the end of each Testing of Limits performance the examiner makes a drawing of the subject's arrangement of the three test forms. In Testing of Limits as in the Productions, Repetitions of Directions are given only when the subject indicates a need for structuring. Each additional repetition required reflects an increasing dependency need and need for further structuring of the environment.

# Chapter XI

# Fein Scoring Schedule For 3-DPT Functional Analysis

## PERSONAL DATA

Name.............................. M/F.... Age.... Birthdate........ Birthplace........
Address...................................... Marital Status............ Children............
Schooling...................................... Occupation......................................
Spouse......................... Age........ Schooling........... Occupation............
Father................. Age........ Mother................. Age........ Siblings........
Nationality.... (F)........... (M)........... Spouse (F)...........(M)...........
Religion (self)................ (F)................ (M)................ Spouse.............
Religious Observance, Childhood Orthodox...... Liberal...... Token......
Present..........................................................................................
Reason for Referral..........................................................................
..........................................................................................................
Source of Referral............................................................................
..........................................................................................................
Test Administered........... Date........ Test Analyzed........... Date........

*Abbreviations*

TF—Test Forms
TFSEL—Test Forms Selected

)........ moved toward
........) moved away—facing

TFAD—Test Forms Added
Des.—Design
Bld.—Building
Srt.—Sorting
Mvt.—Movement
Prod.W—Production Words
St.W—Story Words
GRT—Gesture Reaction Time
VRT—Verbal Reaction Time
TTProd.—Total Time, Production
St.T—Story Time

........( back turned
Hrp—Human Role Playing
Arp—Animal Role Playing
Irp—Inanimate Role Playing
Manu. Rej.—Manual Rejection
tch(d).—Touched
def. art.—definite article
Pos.C—possessive case
M—Moved
Arb.—arbitrary statements

### Aids to Scoring

Record in seconds, GRT and VRT; in minutes TTProd. and Story Time.

Record total Prod.W/St.W, Number of Designs, Sortings, Buildings, Agents or Objects not Represented by TF, TF Selected and TF Added.

Record Repetitions of Directions as follows: 0, 1, 2, 3, 3+

List verb tenses, literary styles, time perspectives, background, feeling tones with TF

Check use of first person, fixed ideation (with TF for def. art. or pos. case)

Record TF for Type of Movement, Isolates, Contents.

Record inappropriate behaviors; alternatives; multiple concepts for one TF; multiple forms for one concept; arbitrary statements, etc.

### Scoring Schedule

| *Variables* | *Prenaming Production* | *Postnaming Production* |
|---|---|---|
| TFSEL/TFAD | | |
| GRT/VRT | | |
| TT Prod./St.T. | | |
| Prod. W/St.W | | |
| Repetitions of Directions | | |
| *Verbal Constructions* | | |
| # St. | | |
| Verb tenses | | |
| Literary styles | | |
| # Sortings & TF | | |

| | |
|---|---|
| # Agents or Obj. Not repres. | |
| Time perspective | |
| Background | |
| *Use of 1st person* | |
| TF used as reality | |
| Pers. Exp. recalled | |
| TF symbols of reality | |
| Pers. Preferences exp. | |
| Story heard or read | |
| *Fixed Ideas* | |
| same theme 2 St. | |
| theme dev. St. to St. | |
| no St. | |
| def. art. or Pos.C | |
| *Manipulation Constructions* | |
| TF used | |
| # Des. with TF | |
| # Bld. with TF | |
| *Type of movements with TF* | |
| tch | |
| Hrp | |
| Arp | |
| Irp | |
| Manu. rej. | |
| M. in Des. or Bld. | |
| M. to punctuate ident. | |
| *Contents and TF* | |
| bone | |
| human | |
| animal | |
| nature | |
| food | |
| waste matter (excr.) | |
| inanimate, man-made | |
| vague | |
| abstraction | |
| mythological | |
| religious | |
| ambiguous | |
| agent | |
| object | |
| active | |
| latent | |

| | |
|---|---|
| *Feeling Tones and TF (list)* | |
| *Isolates and TF* | |
| *Alternatives or opp. Char. (TF)* | |
| *Inappropriate concepts (Arb., multiple, etc.)* | |
| | |

SCORING SCHEDULE (*Continued*)

| *Variables* | *Testing of Limits I* | *Testing of Limits II* |
|---|---|---|
| GRT/VRT | | |
| Limits TT | | |
| St. T | | |
| TFAD/used | | |
| | #12 #17 #21 | #12 #17 #21 |
| TF ignored | | |
| not tchd. | | |
| tchd. not moved | | |
| back turned | | |
| moved away | | |
| moved closer | | |
| friendly | | |
| assaultive | | |
| no relationship | | |
| relationship denied | | |
| *Content and TF* | | |
| human | | |
| animal | | |
| inanimate | | |
| mythological | | |
| religious | | |
| agent | | |
| object | | |
| active | | |
| latent | | |
| other | | |
| *Feeling Tones list with TF* | | |
| | | |
| *Agents/obj. not repres. by TF* | | |
| | | |

*Specific contents and TF in total performance that reveal special attitudes and complexes*

| Prenaming Production | Postnaming Production | Naming Test | Limits |
|---|---|---|---|

# Appendix

## Sample Protocol

### 3-DPT Performance by a 41-year-old Married Woman

J.D. had been hospitalized after attempting to choke her dog. She had a history of promiscuous sexual activity with many abortions and one still birth.

#### PRENAMING PRODUCTION

GRT: 110″ VRT: 110″ TT, Production: 7′ st.T: 2′20″

Test Forms Selected: #28, #27, #26, #25, #24, #23, #22. (Table 2).

Test Forms Added: #10, #21, #12, #17, #13, #14, #20, #19, #15, #18, #16 (Table 2).

Test Forms manipulated: #7, #8, #9, #11 (Table 1).

Test Form #11 picked for Table 2, then rejected, returned to Table 1.

Test Form #10 freely manipulated throughout Production.

As J.D. selected the test forms, she questioned and protested: "As many pieces as I want to? Oh, that is difficult isn't it? Oh, do I have to do this? Do I have to use as many pieces as possible? [Directions were repeated.] I don't want to do it, but if you make me do it I will do it. Should I do it? [Directions were repeated.]"

"Well they say [140″] the world began with such small animals [touched #28, #27, #26, #25, #24, #23, #22], and they gradually got bigger and bigger and bigger and snake [#10 moved away from others] (I'm afraid I'm not going to have a very interesting story), and then there came Man [#21 and #12 are set apart] and Woman and then there came one child [#17 is moved up to the others, i.e., #21 and #12] and they made things to sit on [#13 is moved close to these other three] and this could be a toilet seat [#11 as she picked it up in her hand and regarded it carefully, then laughingly replaced it on Table 1] and this could be something to sit on [#14 moved as identified] and then they die [#20 is moved up next to #12]. I guess this could symbolize the end [#20 pointed to], couldn't it? That's it." [2′20″]. She picked #19, placed it on Table 2. "This could be the seashore, this [#15 picked and placed on Table 2] is a rock worn down by the steady flow of water over the years [#16 picked and placed on Table 2]. Snake sort of seems like sex. I had a dream for years, this snake got bigger and bigger and bigger" [#10 picked up, regarded and replaced on Table 2]. "You could make this a coil of rope instead of a snake." Pointing to #7, #8, #9 on Table 1 and laughing, she said: "The way they are arranged they look like sex, this [#7] is the penis and these [#8 and #9] are the testicles" (TT: 7′).

The test forms at the end of her Production were arranged in a Design with test forms in fairly regular parallel lines in the following order, from left to right: top row—#20, #12, #17, #22, #23, #24, #25, #26, #27, #28; bottom row—#19, #15, #13, #21, #14, #10, #11, #16. #11 was replaced on Table 1.

### NAMING TEST RESPONSES

| TF | GRT | VRT | Associations to Test Forms |
|---|---|---|---|
| 1 | 1″ | 1″ | (Touched) "A cake of soap" (spontaneously touched #2) "This is a smaller cake of soap." |
| 15 | 6″ | 6″ | "I don't know, stone warped by sea, air, atmosphere" (caressed). |
| 21 | 6″ | 6″ | (Picked, regarded) "Man bent under plow or yoke." |
| 5 | 9″ | 9″ | (Picked, regarded) "Might be leg, might be a cartridge shell or something." |
| 13 | 2″ | 2″ | (Touched) "Looks like something someone fashioned to sit on." |
| 24 | 3″ | 3″ | (Picked, pointed to #22, #23, #25, #26, #27, #28) "Is one different from the other? Some small objects progressing from small to large." |
| 14 | 3″ | 3″ | (Picked, regarded) "Looks like something someone might have fashioned, faint resemblance to a face, ears on side." |
| 20 | 2″ | 6″ | (Turned, regarded) "Don't know, might be people crouched down praying." |
| 4 | 5″ | 3″ | "Cornered stone" (touched). |
| 8 | 5″ | 5″ | (Touched) "Don't know, stones I guess." |
| 22 | 5″ | 5″ | (Touched) "Somebody's leg." |
| 16 |  | 5″ | "Don't know nothing, snake curled around all over." |

| | | | |
|---|---|---|---|
| 3 | | 2″ | “Looks like one of the blocks we used the other day.” |
| 25 | | 1″ | “We did that one.” |
| 17 | 2″ | 5″ | (Picked, regarded) “Well – mother and child, or it might be an elderly woman carrying someone or someone is crying.” |
| 26 | | 1″ | “We did that one.” |
| 6 | | 3″ | “Small keg I guess.” |
| 12 | | 4″ | “This might be the Madonna or a nun.” |
| 28 | | 1″ | “I told you that.” |
| 7 | 15″ | 12″ | “A pyramid but this arrangement [Table 1, #8, #7, #9] I told you makes me think of sex this [#7] looks like a penis, these [#8, #9) look like testicles.” |
| 18 | 6″ | 8″ | (Picked, regarded) “Looks like something that had been withered.” |
| 11 | | 2″ | “Reminds me of a toilet seat.” |
| 9 | | 2″ | “Testicles or stone.” |
| 10 | | 2″ | “Snake that was sort of the feeling I was telling you about.” |
| 23 | | 3″ | “Reminds me of a leg.” |
| 19 | | 7″ | “Stony crag formation of ground.” |

POSTNAMING PRODUCTION

GRT: 25″ VRT: 25″ TT, Production: 3′ St.T:2′

Test Forms Selected: #13 (Table 2)

Test Forms Added: #14, #21, #12, #20, #17, #1, #10, #16

Test Forms were moved into Design as they were incorporated into the Story.

Story: "Well, I suppose we have a house with furniture [#13, #14] in it and this man [#21] he might possibly be a farmer and his wife [#12] and the children [#20] and [#17] these might be crying about something, something might have happened and he might have been killed, pet or something or one of them and this is the grave [#1] and the snake [#10] might have killed him and that's the end of my story [2′]. It seems to me that this [#16] might be useful in the story but I don't know what or how."

The test forms at the end of the story were arranged in three rows in the following order: row one, left to right—#20, #17, #14, #16; row 2—#12, #13; row 3—#21, #10, #1.

### TESTING OF LIMITS I

GRT: 10″ VRT: 30″ TT, Limits: I 7′ St.T: 5′40″

J.D. moved #17 around and away from #12 with its back to #12 but facing #21: "Well, what kind of a story would you like? Well I don't know I think the man is working, he's making changes and this looks like a woman, a madonna or something, could look like a bear [moved #12 toward #17], (but do you still want a story?) Well I think this is the man, woman and child and this man [touched #21] he's sowing in the field and this [#17] is a bird swooping down and picking up all the grain just as soon as he sows it and woman [#17] she doesn't do anything she might be weeping and the man ordinarily he would try to chase the bird away except that he can't, he looks as if he has something wedged across him here [pointed to detail on #21]. He worked very hard, he looks burdened [touched #21] and she looks distorted [touched #12] and the little child [touched #17] is just there man attacks woman and he is in chains."

J.D. went on talking even though she had finished with her Story around the TL1 test forms and as she talked she picked more test forms and gave gratuitous associations to them as she placed them on Table 2. Thus she selected Test Forms #16, #10, #7, #8, #9 and placed them on Table 2, and proceeded to associate:

"As I said this [#16] reminds me of sex like my dream and this could be a coil of rope as well as a snake [#10] and these [#7, #8, #9] could be a penis and testicles" (7′).

"I think of my grandparents, he was a farmer and worked very hard. I started going out when I was about eleven years old and I was married at twenty-eight. I just couldn't decide but when my husband forced me then I got married. You see we had sex relations before marriage and I had three abortions, he was a married man and he was angry that I got pregnant but the last one I wouldn't have an abortion so he had to marry me but the baby was born dead. Now my husband is in chains." (She laughed and went on at great length about her feelings [15′]. J.D. manipulated TF #16, #10, #8, #7, #9 freely throughout her verbalizations.)

## GUIDE TO MACHINE CODING OF 3-DPT PRODUCTIONS AND TESTING OF LIMITS

Complete coding of Production and Testing of Limits data requires the use of four IBM cards. In this study, card 29 was used for coding the structural variables in the Prenaming Production and Card 30 for the Content Variables, general Behavior Variables and Feeling Tones in the Prenaming Production as well as Feeling Tones in the Postnaming Production. Card 59 was used for coding the structural variables of the Postnaming Production; card 60 was used for coding Testing of Limits variables, and the

Content and Behavior Variables of the Postnaming Production.

Space is allowed for card identity and subject identity on each of these four cards.

A complete and detailed listing of the variables to be treated as well as the manner in which they are coded follows.

## MASTER KEY TO CODING VARIABLES IN PRENAMING AND POSTNAMING PRODUCTIONS

### Cards 29 and 59

| *Columns* | *Variables* | *IBM Treatment* |
|---|---|---|
| 1-2 | Card Identity (29 or 59, as the case may be) | Direct Punch |
| 3-6 | Subject Identity | DP |
| 7 | Number of Stories | DP |
| 8-9 | Number of Test Forms Selected before Story is begun | DP |
| 10-11 | Number of Test Forms Added as Story proceeds | DP |
| 12 | Gesture Reaction Time (In seconds) | Code |
| 13 | Verbal Reaction Time (In seconds) | Code |
| 14-15 | Ratio of Gesture to Verbal Reaction Time | DP |
| 16 | Total Time for Production (In Minutes) | Code |
| 17-18-19 | Total Number of Words in Production | DP |
| 20-21-22 | Number of Words in the Story | DP |
| 23-24 | Difference between Number of Words in Story and Production | DP |
| 25-26 | Number of Nouns in Story | DP |
| 27-28 | Number of Verbs in Story | DP |
| 29-30 | Number of Different Adjectives in Story | DP |
| 31-32 | Number of Different Adverbs in Story | DP |
| 33-34 | Number of Different Nouns in Story | DP |
| 35-36 | Number of Different Verbs in Story | DP |
| 37 | Verb Tense | Code |
| 38 | Time Perspective | Code |
| 39 | Literary Styles | Code |
| 40 | Number of Building Constructions | DP |
| 41 | Number of Design Constructions | DP |
| 42 | Number of Sortings, Classifications (Conceptual) | DP |
| 43 | Type of Movement of Forms Displayed | Code |
| 44 | Number of Inappropriate Building Constructions | DP |
| 45 | Number of Inappropriate Designs | DP |
| 46 | Number of Inappropriate Sortings, Classifications | DP |
| 47 | Number of Inappropriate Movements of Forms | DP |

Cards 29 and 59 *(Continued)*

| *Columns* | *Variables* | *IBM Treatment* |
|---|---|---|
| 48 | Number of Agents and/or Objects not Represented by Test Forms | DP |
| 49 | Use of First Person in Story | Code |
| 50 | Background of Events | Code |
| 51 | Fixed Ideas | Code |
| 52 | Number of Arbitrary Phrases, Clauses, Statements | DP |
| 53-80 | Unique Treatment of Each Test Form | Code |

## CODING TABLES

### Card 29—Prenaming Production
### Card 59—Postnaming Production

| *Columns* | *Variables* | | *IBM* |
|---|---|---|---|
| 1-2 | Card Identity | | DP |
| 3-4-5-6 | Subject Identity | | DP |
| 7 | Number of Stories Given | | DP |
| | 0 | | |
| | 1 | | |
| | 2 | | |
| | 3 | | |
| | 4 | | |
| | 5 | | |
| | 6, etc. | | |
| 8-9 | Number of Test Forms Selected before Story is Begun | | DP |
| | 0 | 0 | |
| | 1 | 1 | |
| | 2 | 2 | |
| | 3 | 3 | |
| | 4 | 4 | |
| | 5, etc. | 5, etc. | |
| 10-11 | Number of Test Forms Added as Story Proceeds | | DP |
| | 0 | 0 | |
| | 1 | 1 | |
| | 2 | 2 | |
| | 3 | 3 | |
| | 4 | 4 | |
| | 5, etc. | 5, etc. | |
| 12 | Gesture Reaction Time | | Code |
| | *Code* Reaction Time (gesture) spontaneous | | |
| | 0 | 1" or less | |
| | 1 | 2"– 5" | |
| | 2 | 6"– 10" | |
| | 3 | 11"– 15" | |
| | 4 | 16"– 20" | |
| | 5 | 21"– 25" | |
| | 6 | 26"– 30" | |
| | 7 | 31"– 35" | |
| | 8 | 36"– 40" | |
| | 9 | 41"– 60" | |
| | 11 | 61"–120" | |
| | 12 | 121" + | |

CARD 29 AND 59 (*Continued*)

| *Columns* | *Variables* | | | *IBM* |
|---|---|---|---|---|
| 13 | Verbal Reaction Time | | | Code |
| | *Code* | *Reaction Time* | | |
| | | Spontaneous | | |
| | 0 | 1″ or less | | |
| | 1 | 2″– 5″ | | |
| | 2 | 6″– 10″ | | |
| | 3 | 11″– 15″ | | |
| | 4 | 16″– 20″ | | |
| | 5 | 21″– 25″ | | |
| | 6 | 26″– 30″ | | |
| | 7 | 31″– 35″ | | |
| | 8 | 36″– 40″ | | |
| | 9 | 41″– 60″ | | |
| | 11 | 61″–120″ | | |
| | 12 | 121″ + | | |
| 14-15 | Ratio of Gesture to Verbal Reaction Time[*] | | | DP |
| | 0 | .0 | | |
| | 1 | .1 | | |
| | 2 | .2 | | |
| | 3 | .3 | | |
| | 4 | .4 | | |
| | 5 | .5 | | |
| | 6 | .6 | | |
| | 7 | .7 | | |
| | 8 | .8 | | |
| | 9 | .9 | | |
| | 11 | .11 | | |
| | 12 | .12 | | |
| 16 | Total Time for Production (minutes) | | | Code |
| | *Code* | *Total Time* | | |
| | 0 | 1′ or less | | |
| | 1 | 2′– 3′ | | |
| | 2 | 4′– 5′ | | |
| | 3 | 6′– 7′ | | |
| | 4 | 8′– 9′ | | |
| | 5 | 10′–11′ | | |
| | 6 | 12′–13′ | | |
| | 7 | 14′–15′ | | |
| | 8 | 16′–17′ | | |
| | 9 | 18′–20′ | | |
| | 11 | 21′ up | | |
| | 12 | no response | | |
| 17-18-19 | Total Number Words in Production | | | DP |
| | 0 | 0 | 0 | |
| | 1 | 1 | 1 | |
| | 2 | 2 | 2 | |
| | 3 | 3 | 3 | |
| | 4 | 4 | 4 | |
| | 5 | 5 | 5 | |
| | 6 | 6 | 6 | |
| | 7 | 7 | 7 | |
| | 8 | 8 | 8 | |
| | 9 | 9 | 9 | |
| 20-21-22 | Number of Words in Story (or substitute for Story)<br>Same as above | | | DP |
| 23-24 | Difference between Number Words in Production and Number Words in Story<br>Same as above | | | DP |
| 25-26 | Number Nouns in Story(ies)[*] | | | DP |

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[*] These measures are not useful for statistical purposes.

CARD 29 AND 59 (*Continued*)

| *Columns* | *Variables* | *IBM* |
|---|---|---|
| 27-28 | Number Verbs in Story(ies)[*] | DP |
| 29-30 | Number Different Adjectives in Story(ies) | DP |
| 31-32 | Number of Different Adverbs in Story (or substitute for Story) | DP |
| 33-34 | Number of Different Nouns in Story (or substitute for Story) | DP |
| 35-36 | Number of Different Verbs in Story (or substitute for Story) | DP |
| 37 | Verb Tense<br>*Code* *Tenses*<br>0 None<br>1 Present (is)<br>2 ....................<br>3 Past (was)<br>4 ....................<br>5 Future (will, shall)<br>6 Imperative<br>7 Conditional present (could be, may be, would go)<br>8 Conditional past (could have been, may have done, etc.)<br>9 Illogical sequence | Code |
| 38 | Time Perspective<br>*Code* *Time*<br>0 vague, undetermined, no indicators present<br>1 early 20th cent. (to 1920, World War I)<br>2 middle 20th Cent. (World War I to present)<br>3 18th-19th Cent. (Early Amer., Fr. Rev.)<br>4 Medieval (Crusades)<br>5 Ancient (Greeks, Romans, Etruscans, etc.)<br>6 Bible (Adam and Eve, Moses, Jesus, etc.)<br>7 Prehistoric (cavemen, stone age, dinosaurs, etc.<br>8 Eternal (Through the Ages, God's Universe) | Code |

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[*] These measures are not useful for statistical purposes.

CARD 29 AND 59 (*Continued*)

| *Columns* | *Variables* | *IBM* |
|---|---|---|
| | 9 Mythological (witches, giants satyrs, moonman, Superman, etc.) | |
| 39 | Literary Styles | Code |
| | *Code* *Styles* | |
| | 0 Naming | |
| | 1 .................. | |
| | 2 Exposition | |
| | 3 .................. | |
| | 4 Free Association | |
| | 5 .................. | |
| | 6 Description | |
| | 7 .................. | |
| | 8 Drama | |
| | 9 .................. | |
| 40 | Number of Building Constructions | DP |
| 41 | Number of Design Constructions | DP |
| 42 | Number of Conceptual Classifications (Sortings) | DP |
| 43 | Manner in which Test Forms are Moved as Story Develops | Code |
| | *Code* *Movements* | |
| | 0 None | |
| | 1 Test forms are only touched as aid in indentifying | |
| | 2 Human role playing | |
| | 3 Test forms moved randomly | |
| | 4 Animal role playing | |
| | 5 Test forms rejected manually | |
| | 6 Inanimate role playing | |
| | 7 Test forms moved experimentally | |
| | 8 Test forms moved for design and/or building | |
| | 9 Test forms moved as aid in identifying | |
| 44 | Number of Inappropriate Building Efforts | DP |
| 45 | Number of Inappropriate Design Efforts | DP |
| 46 | Number of Inappropriate Sortings | DP |
| 47 | Number of Inappropriate Movements of Test Forms | DP |

### CARD 29 AND 59 (*Continued*)

| *Columns* | *Variables* | *IBM* |
|---|---|---|
| 48 | Number of Agents and/or Objects not Represented by Test Forms | DP |
| 49 | Use of First Person in Production<br>*Code* *Pattern*<br>0 None<br>1 Test Forms are treated as reality, e.g., "This is me, my, you," "That's my story," etc.<br>2 Test Forms stimulate recounting personal experiences<br>3[*] Personal experience recalled, test forms used as personal symbols, e.g., *"This reminds me of myself, my mother,"* etc.<br>4 Test Forms stimulate expression of personal preferences<br>5[*] Personal experiience recalled and portrayed by test forms *except for the humans. No forms are used to represent humans, e.g., "This could be our living room, my wife would serve drinks, these could represent the drinks [5 and 6]," etc.*<br>6 Test forms stimulate memory of story heard or read. | Code |
| 50 | Background of Events<br>*Code* *Place*<br>0 None indicated<br>1 Home inside or outside<br>2 Public place (museum, zoo, city, dock, theater, park, etc.)<br>3 Desert, island, mountain, field, jungle, i.e., an isolated place of nature | Code |

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[*] 3 and 5 may be combined—Both are common to normal records.

CARD 29 AND 59 (*Continued*)

| *Columns* | *Variables* | *IBM* |
|---|---|---|
| | 4 Church | |
| | 5 Water | |
| | 6 Ruins, graveyard, excavations, i.e., desolation, decay | |
| | 7 Geography named | |
| | 8 Vague, not clear | |
| | 9 Mythological, e.g., home of Gods, etc. | |
| | 11 Futuristic space conceptions such as life on other planets, etc. | |
| 51 | Fixed Ideas | Code |
| | *Code* | |
| | 0 No Evidence of fixation | |
| | 1[*] Same theme in two stories, i.e., Pre-and Postnaming | |
| | 2 Theme of 1st Story developed further in 2nd Story | |
| | 3[†] Only Prenaming Story given, no Postnaming | |
| | 4[*] Two or more Pre-or Postnaming Stories have the same theme | |
| | 5[†] Only Postnaming Story given, no Prenaming | |
| | 6[*] Same theme in one Story and TL1 | |
| | 7[*] Same theme in two Stories and TL1 | |
| | 8[†] No Stories except in TL1 | |
| | 9 Use of definite article or possessive case in Naming Test identifications, Postnaming Production, TL1, or TL2 | |
| | 11 No Prenaming, Postnaming, or TL Stories, but responses are given to Naming Test | |
| | 12 No Responses at all | |

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[*] 1, 4, 6, 7 may be combined for statistical purposes.

[†] 3, 5, 8 may be combined for statistical purposes.

CARD 29 AND 59 (*Continued*)

| *Columns* | *Variables* | *IBM* |
|---|---|---|
| 52 | Number Arbitrary Statements, i.e., those that do not fit logically into the Story contents and do not refer to a particular test form | DP |
| 53-80° | Unique Treatment of Each Test Form<br>*Code* *Treatment*<br>0 First form reacted to<br>1 Used in Design<br>2 Used to represent multiple concepts at same time<br>3 Used in Isolate Manipulation<br>4 Each of multiple test forms used to represent one concept at one and the same time, the combination being arbitrary<br>5 Used in representation of opposite characteristics<br>6 Indecisively identified (alternatives)<br>7 Used in Building effort<br>8 Used as or in an Isolate Idea<br>9 Moved as Story is developed<br>11 Used in Sortings, concept classification<br>12° Chosen, then rejected | Code |

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° Transferred to Contents for statistical analysis.

## MASTER KEY TO CODING CONTENT VARIABLES IN PRENAMING PRODUCTION, GENERAL BEHAVIOR OF SUBJECT DURING TESTING, AND FEELING TONES

### CARD 30

| *Columns* | *Variables* | *IBM Treatment* |
|---|---|---|
| 1-2 | Card Identity (in this case it is 30) | DP |
| 3-6 | Subject Identity (number assigned) | DP |
| 7-62 | Content variables for each Test Form | Code |
| 63 | General Behavior Variables | Code |
| 64 | Feeling Tones in Prenaming Story | Code |
| 65 | Feeling Tones in Postnaming Story | Code |

| | | |
|---|---|---|
| 1-2 | Card Identity (30) | DP |
| 3-6 | Subject Identity (assigned number) | DP |
| 7-62 | Content Variables[*] for Each Test Form (Two columns are allotted to each test form for coding) | Code |

| *Code* | *Variables for first column coding of each test form* (same content definitions for Postnaming on Card 60) |
|---|---|
| 0 | Bone (includes bone for dog, ancient bone, chicken bone, human bone, etc.) |
| 1 | Human and parts (includes mythological humans, as elves, giants, trolls and inanimate representations, as statues, dolls, puppets. Parts refer to human faces, arms, legs, also wooden legs, false teeth, etc.) |
| 2 | Animal and parts (includes mythological animals, as unicorns, extinct animals, as dinosaurs; also birds, fish, and inanimate representations, as teddy bears, Mickey Mouse, etc.) |
| 3 | Nature (includes vegetation, as trees, flowers; minerals, as rocks, metals, earth, water, fire, stars, planets; but not agricultural products like kernel of wheat, corn, or potato which are listed under food.) |
| 4 | Food (includes meats, vegetables, fruits, candy; |

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[*] Content variables adopted from Doris Twitchell-Allen and Roland Shepard (234).

CARD 30 *(Continued)*

also related oral objects, as medicine, chewing gum, and some noningested oral objects, as cigarettes, pipes, etc.)

5 Excreta, anal and oral

6 Inanimate, man-made (includes mechanical, architectural, recreational and other man-made objects, as stones for steps, logs, snowforts, etc. This also includes all natural materials manipulated by man, such as molded clay, gravel for roads, etc.)

7 Vague (includes those contents where no identifiable characteristics are indicated such as thing, something, junk, etc. )

8 Test form chosen by subject then rejected

9 Incomprehensible responses such as neologisms

11 Where responses are ambiguous as to whether human, animal, or part of either (creature, head, leg, mermaid, etc.)

12 Abstractions (includes geometric forms, as cubes, cylinders, triangles, squares; also peace, the work, hate, confusion. Also include here such abstract forms as pyramid, prism, unless these and the forms above are identified as real structures, e.g., pyramid in Egypt, cube of ice, square box, triangle, or three-cornered sandwich.

7-62 Content Variables Defined Code

*Code* *Variables to be coded in second column for each test form (same as Card 60)*

0 Movement (where the form is actually seen in motion such as walking, running, hopping, climbing, talking, bending, lifting, crouching, etc.). In these cases the person, animal, or thing is seen as changing its position relative to its surroundings, or it is seen as carrying on activity within itself so that there is tension in the muscle system. In other words, if the motion would tire the individual if continued indefinitely, it is scored as real motion.

1 Latent movement (where the form is seen in a quiescent position arrived at from some activity and that could easily lead back to activity). In

CARD 30 *(Continued)*

| | |
|---|---|
| | latent movement the muscles are at rest, no tension is experienced, and continuation of the activity will not lead to fatigue of the system, e.g., a person or animal curled up, sleeping, resting, lying down, sitting, leaning, hanging limply, etc. |
| 2 | Mythological representation |
| 3 | Artificial representation |
| 4 | Form criticized such as, "It is a man but such a crude representation." |
| 5 | Form represents negative symbolism |
| 6 | Emphasis on detail within general response such as, "This [#17] is a monkey; he has his arm up over his face. I see his arm so clearly." |
| 7 | Used as agent, i.e., the form is seen as doing the action. |
| 8 | Used as object, i.e., the form is seen as receiving the action. |
| 9 | Religious representation such as Adam and Eve, Jesus, Mary, Moses, church, altar, shrine, monastery, etc. |
| 11 | Form represents goodness, kindness, desirable qualities, positive symbolism |
| 12 | Sex |

63 General Behavior Variables

| *Code* | *Pattern of behavior* |
|---|---|
| 0 | Subject rejects Story and gives another |
| 1 | Subject criticizes story but keeps it |
| 2 | Subject asks reassurance of examiner, e.g., "Is this what you want?" "Am I doing it right?" "Should I tell about each piece I pick?" "Do you want a true story or make-believe?" etc. |
| 3 | Story reflects struggle for attainment, striving, i.e., effort expended but nothing accomplished. |
| 4 | Subject protests, "Can't give story," "Don't know how to begin," "Have no imagination." |
| 5 | Directions were repeated once to aid subject |

CARD 30 *(Continued)*

6 Directions were repeated more than once to aid subject

7 Social exchange—friendly, e.g., "Nice day," "You are so patient with me," "This is interesting," "Do you have children," etc.

8 Social exchange—hostile, e.g., "I told you enough, why don't you let me test you?" "This is a bunch of junk," etc.

9 Subject states that he must plan before acting or makes other remark reflecting careful, cautious deliberation

64 Feeling Tones in Prenaming Story(ies) Code

*Code*

0 Happy, cheerful, contented, kind, love

1 Ashamed (apologizes, atones, reforms, blames self)

2 Afraid, seclusive

3 Striving, aspiring (toward achievement)

4 Restless, nervous, fidgety

5 Sad, depressed, hopeless, tired, despairing

6 Mad, angry, hateful, threatening, fighting, criticizing, etc.

7 Confused, perplexed, crazy, drunk, jumbled

8* Indifferent, aloof

9* Self-centered, conceited, etc.

11 Protective, assumes responsibilities for others' welfare

12 Ambivalent, inner conflict

65 Feeling Tones in Postnaming Story(ies)
Same code as for column 64

---

* 8 and 9 may be combined for analysis.

## MASTER KEY TO CODING VARIABLES IN TESTING OF LIMITS AND CONTENTS IN POSTNAMING PRODUCTIONS

### CARD 60

| *Columns* | *Variables* | *IBM* |
|---|---|---|
| 1-2 | Card Identity (60) | DP |
| 3-6 | Subject Identity (number assigned) | DP |
| 7-9 | Test Form #12 | Code |
| 10-12 | Test Form #17 | Code |
| 13-15 | Test Form #21 | Code |
| 16-17 | Number of Test Forms Added (Testing of limits involves test forms #12, #17 and #21 which are placed by the examiner on Table 2. If the subject adds another test form, punch the number of the test forms in columns 16-17.) | DP |
| 18 | Number of Agents and/or Objects Not Represented by Test Forms | DP |
| 19 | Total Number of Test Forms Used | DP |
| 20 | Total Number of Agents and Objects Introduced (Each of a series of multiple responses to one test form should be counted. Objects and Agents not represented by Test Forms should also be counted.) | DP |
| 21 | Verbal Reaction Time in TL1 | Code |
| 22 | Gesture Reaction Time in TL1 | Code |
| 23 | Total Time for TL1 | Code |
| 24-79 | Content Variables for each Test Form in Postnaming Production (See card 30, columns 7-62) | Code |

Code for Columns 7, 10, 13 (Each column here represents one of the test forms.)

| *Code* | *Variables** |
|---|---|
| 0 | Not identified |
| 1 | Human (as defined for production analysis) |
| 2 | Animal (as defined for production analysis) |

---

* In coding these variables, use columns 7, 8, 9 for test form #12; columns 10, 11, 12 for test form #17; columns 13, 14, 15 for test form #21.

### CARD 60 *(Continued)*

| | |
|---|---|
| 3 | Man-made objects (as defined for production analysis) |
| 4 | Natural objects (as defined for production analysis) |
| 5 | Abstractions (as defined for production analysis) |
| 6 | Test form not touched |
| 7 | Test form moved away from other(s) |
| 8 | Test form turned with back to other(s) |
| 9 | Test form moved toward other(s) in friendly way |
| 11 | Religious representation |
| 12 | Test form continuously manipulated |

Code for Columns 8, 11, 14

| *Code* | *Variables*[*] |
|---|---|
| 0 | Test form related to other(s) in theme |
| 1 | Test form seen in motion, e.g., walking, running, etc. |
| 2 | Test form treated as isolate, no verbally expressed relationship |
| 3 | Test form seen in latent motion, e.g., sleeping, sitting, leaning, etc. |
| 4 | Verbal denial of relationship between test forms |
| 5 | Test form used as agent |
| 6 | Test form used as object |
| 7 | Test form moved in assault toward others |
| 8 | Test form touched but not moved |
| 9 | Artificial representation |
| 11 | Mythological representation |

Code for Columns 9, 12, 15 (Feeling Tones in TL1 verbalized)

| *Code* | *Variables*[*] |
|---|---|
| 0 | Happy, cheerful, contented, friendly, kind |
| 1 | Ashamed (apologizes, atones, reforms, etc.) |
| 2 | Afraid, seclusive |
| 3 | Striving, aspiring toward achievement |
| 4 | Restless, nervous, fidgety |
| 5 | Sad, depressed, hopeless, tired, despairing |
| 6 | Mad, angry, hateful, threatening, critical |
| 7 | Confused, perplexed, crazy, drunk |
| 8 | Indifferent, aloof |
| 9 | Self-centered, conceited |
| 11 | Protective, assumes responsibilities for others' welfare |
| 12 | Ambivalent, inner conflict |

[*] See footnote, p. 308.

Card 60 *(Continued)*

| *Columns* | *Variables* | *IBM* |
|---|---|---|
| 18 | Number Verbalized Agents and/or Objects Not Represented by Test Forms<br>*Code*<br>0<br>1<br>2<br>etc. | DP |
| 19 | Total Number of Test Forms Used in TL1<br>*Code*<br>0<br>1<br>2<br>etc. | DP |
| 20 | Total Agents and Objects Introduced (Count all identifications made as well as agents and objects for which no test forms are provided.) | DP |
| 21 | Verbal Reaction Time (seconds)—see Card 29, column 12 | *Code* |
| 22 | Gesture Reaction Time (seconds)—see Card 29, column 13 | Code |
| 23 | Total Time for TL1<br>*Code* *Variables*<br>0 1 minute or less<br>1 2-3 minutes<br>2 4-5 minutes<br>3 6-7 minutes<br>4 8-9 minutes<br>5 10-11 minutes<br>6 12-13 minutes<br>7 14-15 minutes<br>8 16-17 minutes<br>9 18-19 minutes<br>11 20 minutes<br>12 no response | Code |
| 24-79 | *Content in Postnaming Production*<br>(See coding Key to card 30 for detailed variables in the content category. Here, as on card 30, two consecutive columns are allowed for each test form. The code as described indicates what variables are punched in the first column and which ones are punched in the second column.) | Code |

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